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MEDICAL AND SURGICAL JOURNAL.

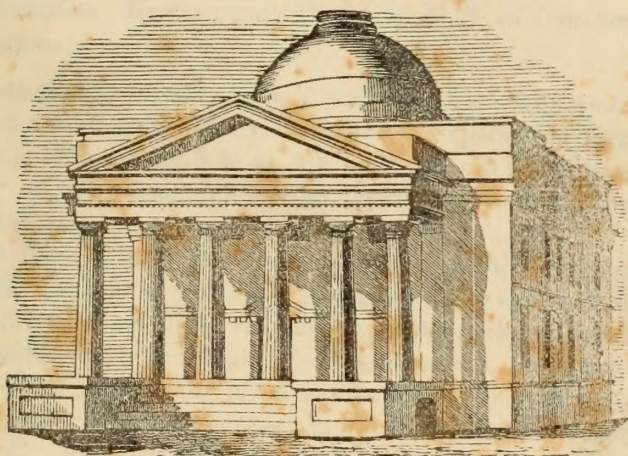
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"Je prends le bien où je le trouve."

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# SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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## ORIGINAL AND ECLECTIC.

### ARTICLE I.

*On Scarlatina.* By COLUMBUS W. SMITH, M. D., of Jonesborough, Georgia.

In attempting to write upon this subject, I am fully aware how difficult a task it is. Many learned and experienced men have endeavored to present it in its true light, and yet scarcely any two agree. It is my design to present the disease as it has recently appeared under my own observation.

The simple form of this disease, termed *Scarlatina Simplex*, was generally ushered in with chill, pain in the head and back, followed by fever; some slight stiffness about the neck and lower jaw. The tongue was very variable in its appearance: it was generally furred white, with papillæ of a red cast showing themselves through the fur, more or less numerous; in a few cases it was a bilious or brown fur, with red edges and without the pimples; but when it had this appearance it was always attended with vomiting of a bilious character, and it assumed more of a general redness after the vomiting had subsided. In some cases the patients were attacked with vomiting and diarrhœa, one or both at the same time. The fauces were invariably red, inflamed and tender, and at times pain was experienced during deglutition, but by no means very acute. No catarrhal symptoms were present; the pulse was generally full and frequent, and the skin hot and dry, although a perspiration would come on once in 24 hours, and last a longer or shorter time; frequently this would occur in the night, after which

the fever would be somewhat moderated. The appetite was occasionally impaired; at other times it seemed as good as in health.

In some individuals an eruption would make its appearance, of a red or scarlet color, with innumerable pimples or small elevations over the skin. This took place usually within the first forty-eight hours: it commenced on the thighs and body, and extended over the whole trunk. By rubbing the finger over the eruption it would feel rough, and by depressing the skin with the finger, a white spot would appear and the red would immediately return. The face was somewhat swollen. This eruption is very irregular in its duration; it generally continues growing thicker and redder until the fourth day, and then gradually declines until the seventh or eighth, when it entirely disappears with desquamation of the cuticle. About the fourth day the fever and inflammatory symptoms begin to decline; but the eruption did not show itself in half the cases we saw, and when there was no eruption there was no desquamation; the fauces would at times be red and tumid previous to the attack in either variety of the disease.

*SCARLATINA ANGINOSA*.—This variety of the disease might be described in a very concise manner, for in truth it seems to be nothing more than an increased or aggravated degree or form of the preceding; but we will try and lay it down more particularly. It was most frequently brought on with chill, high fever, headache, pain in the back, loins, &c. The pulse was rapid, and much more feeble than in the preceding variety; the temperature of the surface was much higher; fauces and adjacent parts were much more inflamed and tumid. There was also considerable difficulty in deglutition; hoarse voice; a tough mucus was secreted or thrown off by the tissues, which appeared to impede respiration more or less—in fact, where the tonsils were much swollen and prostration very great, some seemed to sink from suffocation.

The prostration in this variety was much greater than in the preceding. The tongue was generally furred white, and the papillæ were very manifest upon it. The fur soon left the tongue, and at once it became red and dry, and continued so until an abatement of the symptoms supervened; it then grew moist and paler until it lost its florid hue. Ulcers were formed on the tonsils, on the tongue, inside and at the corners of the mouth; in a few instances, two-thirds of the tongue were covered with a scurf



or scab which yielded to mild astringent gargles. The catarrhal symptoms were absent in every case—occasionally vomiting and diarrhoea were present in the beginning; in others the diarrhoea did not set in until the latter stage. It was then beyond the reach of remedies, and dissolution soon took place. In the latter part of the disease, when fatal, the patients became very restless, rolling and tossing about on the bed; in many of the cases which recovered, the cervical and other glands about the lower jaw became enlarged, suppurated and discharged a large quantity of pus. In those who died, the glands did not become swollen, from which circumstance we were at first led to think it a favorable symptom. It was always six days before any abatement took place, and more frequently not until the eighth, but always on the tenth an abatement was manifest, perspiration came on, and a subsidence of the more distressing symptoms was obvious. One of the most remarkable things connected with it was, in several cases, no loss of appetite occurred through the course of the attack.

The eruption was more irregular and uncertain than in *S. simplex*; some recovered with the eruption, others recovered without, while others died, with their skin as red as flannel. Delirium was present in a majority of the cases.

**SCARLATINA MALIGNA.**—This grade of the disease differs from the others, and is indeed what its name indicates, malignant, in every respect. It usually appears with chill, followed by fever, headache, pain in the back, loins and extremities, with stiffness in the neck and lower jaw; the pulse is feeble; the reaction is not very great; the heat of the skin is not very high—it is lower than in *S. simplex* or in *S. anginosa*. The tongue was red from the beginning, and also the fauces and adjacent parts were highly inflamed and swollen; a mucus was secreted which interfered with respiration, and the parts were so tender and tumid, that deglutition was performed with difficulty. Ulcers were early formed on the tonsils, of rather white appearance, which soon gave way to others of a dark brown color, and altogether more malignant. The tongue and roof of the mouth became very dark and extremely dry; the lips also put on a very dark, dry, parched appearance. The nose ran a watery mucus, and the breath bore a very offensive odor. The rash or efflorescence was so variable that it is unnecessary to speak of it: it was frequently absent, and

so uncertain that it was of no practical importance whatever. In a few hours from the commencement, delirium occurred, the vital powers gave way, the patient fell into a state of collapse, and death ensued.

Death took place in one case in twenty-four hours, and none survived through the sixth day.

*Sequelæ*.—The disease, in the epidemic of which we speak, was followed by anasarca, and in one case rheumatism of the joints of the upper extremities. These were the only diseases that succeeded it.

*Prognosis*.—In this epidemic the prognosis was not very difficult. In *S. simplex* all recovered, and many did not take their beds from it. In *S. anginosa*, when delirium supervened and continued without intermission, with a high grade of inflammation about the throat, pulse quick and feeble, at times the surface would get cool, great restlessness, often turning in bed and attempting to rise or get out of it, cold sweat, diarrhoea, &c., death was the result.

In the cases that recovered, about the eighth or tenth day a general abatement of the symptoms was obvious; less fever, with perspiration; delirium began to moderate; appetite improved, and countenance brighter; the tongue was moist on the edges, which gradually increased until it covered the whole mouth: the florid hue at the same time was disappearing, convalescence was fully under way, and by the fifteenth day they were able to sit up at short intervals.

The prognosis in *S. maligna* is generally easy. In twenty-four or forty-eight hours the delirium was complete; the prostration great, the pulse feeble, respiration hurried, great restlessness; the skin was under the ordinary temperature, with dark, congested spots about on the body and below the eyes; the countenance was of a peculiar ghastly appearance, indicative of great distress and anxiety. We saw no case without a majority of these symptoms, and they all died.

Those who died were from one to thirteen years of age, and none died who was over that age.

*Treatment*.—Most authors teach us that scarlatina is a disease of the skin, and their treatment is predicated upon this belief. We are decidedly of the opinion that it is not exclusively a disease of the skin, and that the eruption should be taken into very little account in determining our practice. Our attention should dwell

upon the particular symptoms attending the case, and our treatment should be directed accordingly.

In the simple variety it was hardly necessary to do any thing—all recovered; but when a treatment was adopted it was the mildest and least irritating. In the beginning, a light laxative of sulph. magnes., Seidlitz powder, or oleum ricini; during the day, small doses spirits nitre every two hours, or spiritus mendereri, or any mild diaphoretic; at bed-time a warm pediluvium; a dose of paregoric to a child, or of Dover's powders to adults, if the fever is not too high, and all will be well.

*Treatment of S. Anginosa.*—If any variety of scarlatina demands close attention and careful treatment, it is this. *S. simplex* will get well if let alone, and *S. maligna* almost as certainly kills; and if any good can be done, it is in *S. anginosa*.

In the incipient stage, an emetic of ipecacuanha was given, and followed by warm infusions, until full emesis was produced. This was done to remove, if possible, the tendency to visceral congestion, after which the stomach was quieted with an opiate, and then a gentle saline laxative, or oleum ricini or any mild aperient was administered, being careful not to induce active purging; after which diaphoretics were given—as vinum ipecac., one-third, and spts. nitre, two-thirds—every two hours, in warm, weak infusions of balm, sage, &c.; or nitrate potash, three grains; ipecac., one grain, intimately mixed, and given as above, and in doses sufficient to nauseate. Spts. mendereri may also be used, or any mild diaphoretic, with the exception of antimonials; at night, warm pediluvium. If the fever was not too high, and the sensorial functions too much disturbed, a Dover's powder was administered; when the skin became cool and pale and the pulse feeble, the mustard foot-bath was used three or four times per diem, and also a sinapism to the spine. If a reaction did not come on, carb. ammonia was given in doses sufficient to raise the pulse as often as the case demanded it. When this did not answer, brandy and water, or other stimulants, were substituted. An application of sinapisms was made to the stomach and bowels if they were disturbed.

Much has been said and done respecting the use of cold water. In the epidemic of which we speak, no good was effected by it: in some instances injury followed its use, and it was altogether improper to use it in either variety.

Gargles were wholly useless in the early stages, and with chil-



dren they did harm; but in the latter stages, when ulcers were present, they were of great benefit. The mild astringent gargles were best, such as alum, infusion of sage, honey and borate of soda; a strong infusion of cinchona, with or without tinct. myrrhæ. Strong and irritating gargles, such as salt and capsicum, &c., &c., were injurious, and cannot be too strongly condemned.

Blisters were used to the throat and nape of the neck in the incipency, if inflammation ran high in those parts, but their use was not attended with much apparent good. They should be used with great caution.

*Treatment of S. Maligna.*—This variety of the disease ran its course so rapidly that scarcely anything could be done. When time was given, it was treated in the same way as *S. anginosa*. If the reaction was high, an emetic was given, followed by gentle aperients; in the sinking state, counter-irritants and stimulants, carb. ammonia, wine, brandy, elixir vitriol, &c., always selecting such as seemed best adapted to the case.

During the stage of excitement, in each variety, cold water was allowed in small quantity, and acidulated if desired. The diet was mild and nutritious; the rooms were ventilated, and the clothing and beds were kept clean.

From our observations in this affection, we have been led to the following conclusions:—That scarlatina is not strictly a disease of the skin, the eruption being merely an effect or an occasional symptom. We could with as much propriety call typhoid fever a disease of the skin, because an eruption accompanies this affection. We think that scarlatina is a modification of the blood, producing great prostration of the nervous system, followed by inflammation of one or more of the internal organs, occasioned by some occult effluvium in the atmosphere, of which we know nothing.

These facts considered, it is but reasonable to conclude that the treatment should be mild and unirritating, as the attack sets in with so much violence as to prostrate the patient at once. We therefore deprecate calomel purges, antimonials in any form, blisters, venesection, &c. They cannot, in our humble opinion, be too strongly condemned. As respects the application of cold water, we have ever been taught that in no disease of the throat or thoracic viscera should it be used, and we know the throat and fauces are invariably sore, inflamed, tumid, &c. This reason, of itself, is

sufficient to proscribe it. We therefore place all of the last named articles in the same category. Those strong and burning gargles never do good, and often do harm, especially with children.

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ARTICLE II.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 7.

MONTGOMERY, ALA., Nov. 25th, 1855.

*Messrs. Editors*—Notwithstanding the advancement which has been made in the science of medicine, and especially in physiology, pathological anatomy, and animal and vegetable chemistry, there has been nothing like a proportionate advancement made in the art of curing diseases; and one of the principal reasons for it, I think, is to be found in the fact, that most of our young physicians set out upon their professional career without having been sufficiently indoctrinated in the principles of *general pathology*. They may have been well instructed in the causes, symptoms, diagnosis, prognosis, treatment, &c., of diseases, as they are taught in the medical schools, and from their text-books, according to the most approved and correct nosological arrangement and classification, and they go forth into the world impressed with the idea, and confident belief, that they are fully prepared for every emergency, and that nothing remains to ensure their success, but to apply those rules to practice. But they often find themselves doomed to disappointment and defeat, and sooner or later discover that the systems of practice founded upon the nosological classification of diseases which they had regarded as the standards of excellence and perfection, are unsatisfactory, unreliable, and often inappropriate to the many changes and modifications which diseases are constantly undergoing, from the influence of climate, seasons, atmospheric changes, conditions, &c., which can be met and provided for only by a correct knowledge of general pathology. Now, I am not opposed to the nosology and classification of diseases, as taught in the schools, and by systematic writers generally; but I am opposed to the *systems of practice* founded upon the simple detail and enumeration, in their order, of the symptoms which characterize the diseases to which they respectively belong, according to their most approved nosology and classification, and I fear that

it will be a long time before we shall see much advancement made, or have any thing like a uniform and reliable system of practice established, unless the present system is changed, and diseases come to be treated, not according to their name, or the class to which they may belong, but according to the condition which they present, and the symptoms upon the merits of their real pathology. If proof is wanted in support of the truth of the assertion, that the practice of medicine has not advanced in proportion to other branches of medical science, it is only necessary to examine the history of some of the most common diseases, as described by the systematic writers of the present day, and compare them with those diseases as described by the old systematic writers who named and classified them. Take Pneumonia, for example, and what *new* features of the disease do we find, which they did not notice, what *new* indications of treatment have we to fulfil, which they did not recommend, and what *new* remedial agents have we which they did not possess. We have the lancet, emetics, cathartics, diaphoretics, expectorants, blisters; so had they. We have calomel, tart. emetic, opium, quinine, &c.—they had calomel, tart. emetic, opium and cinchona. We have phosphorus, bryonia, belladonna and aconite! Alas, they died before the days of Hahnemann and Homœopathy. We have steam, lobelia, composition and number six!—but to them, the powers of steam and Doctor Thompson were alike unknown. Yet, with all the improvements suggested by these two great luminaries, it cannot be perceived that the disciples of either have made any great advancement in the healing art, or that they have improved much upon the old method of treating pneumonia, and other diseases. What success those old practitioners had in the use of the lancet, calomel, and other time-honored remedies, we have no exact means of ascertaining, unless we take as evidence the fact, that the testimony which they have given of their value and efficacy in the treatment of certain diseases and conditions, has had the endorsement of each age and generation through which it has passed; and it cannot be considered uncharitable in us to suppose, that they were as successful in the treatment of pneumonia, with *those* remedies, before the time of Hahnemann, as his disciples *claim* to be with phosphorus and aconite. Now, my idea is, that these old pioneers and fathers in physic, who named and classified our diseases, understood pretty well their special pathology, and also the power,



efficacy, and value of the remedial agents which they placed in our hands to be used, with a sound judgment and discretion, (in which manner, no doubt, they used them,) each one in its *proper time* and *place*, according to the symptoms indicating its use. But there is one great desideratum which they could not supply, namely, a quick perception, and a sound and discriminating judgment, to make the proper use and application of those remedies, the want of which has not only brought some of the most valuable of them into disrepute, and led to their rejection, or *discard*—such, for instance, as calomel and the lancet—but has rendered these *two* articles if not the *worst used*, at least the *best abused*, of any other two in the *materia medica*. It is true, that diseases are subject to such changes and modifications, in their general character, as to require a corresponding change or modification of treatment, for which our old authors made ample provision for supplying us with the means and remedial agents best suited to those changes and modifications—not supposing, I dare say, that they were to be used after the manner of the backwoodsman, who sat down to dinner at a fashionable hotel, and finding a bill of fare before him, thought it incumbent upon him to eat through it in regular order; or, perhaps, like a certain disciple of Hahnemann, not a hundred miles from this, who being called upon by a lady for something to ease an aching tooth, after calling often, and prescribing a great quantity of remedies, it finally became easy. Upon his next visit, finding such to be the case, he exultingly exclaimed, “Ah, ha, dat ish goot—dat ish it.” But, said the lady, why did you not give me your last remedy at first, and spare me from so much pain? “Oh no, madam, dat ish not goot, dat will not do, it ish not goot; it will not do to skip.” And so it is, I have no doubt, with many who essay to practice the healing art, according to the most approved nosological arrangement and classification of diseases. They find a *bill of fare* before them which they feel bound to go through with, believing that “it will not do to skip.” And it is often a long time, and not until they have had a regular *surfeit*, before they find out how to make a proper selection, or discover that *it will not do to skip*. Now, I do not wish to impeach or impugn the character of the medical profession: on the contrary, I wish to defend it; and I would ask, in all sincerity and candor, of those members of the profession who have raised their voices in denunciation of certain remedial agents—namely, calomel and the lancet—whether

their opposition is of a negative sort, not founded so much upon experience, or observation of their use, as upon the fashionable sentiment of the profession. Whether their opposition is founded upon a conscientious belief of their inefficiency, their inappropriateness, and their dangerous or destructive tendency, after oft-repeated and unsuccessful efforts to apply them to those diseases in which they have been most highly recommended; or whether it is founded upon a reckless use and consequent abuse of those remedies, which by their indiscretion and want of judgment they have aided in bringing into disrepute, and from mercenary motives, or a desire to shield themselves from just and well-deserved censure, and maintain their place in popular favour, that they have joined the general crusade against these remedies? This may be considered a harsh criticism, but it is, nevertheless, a true one, and will apply to every practitioner in the South, who has publicly denounced the use of these remedies, and *especially calomel*, as being unsuited to the treatment of bilious diseases; and I care not which horn of the dilemma he may take. If it is to follow *fashion*, his opinion is worth nothing; if it is from a want of confidence, from the want of success, or the apprehension of danger, from the lack of a knowledge of its proper uses, he is to be pitied; and if it is to foster popular prejudice, from selfish and mercenary motives, he should be despised. For no physician, however well founded may appear to be his objections, can be justified in publicly denouncing a well-known remedy, because he may have been unfortunate or unsuccessful in its use; for, by so doing, he is only exciting and fostering a popular prejudice against a remedy which, in more skilful hands, would prove most efficacious and useful. And until some course of experiments and observations are instituted, to show that the liver has no material agency in the production and aggravation of the malignant forms of diseases in hot climates, and a set of arguments adduced to prove that calomel is not the most certain and reliable remedy known to the profession for regulating and controlling the functions of that organ, I shall be compelled to continue in the belief, that the sins charged to the account of this remedy belong not to the remedy itself, but to those who have misused and abused it.

But let us go back awhile and see how matters stand with our *bill of fare* friends. Well, some get through with it, though they find it generally, "a hard road to trabble, I b'lieve," and find out,

after awhile, that they have consumed a vast amount more than was necessary and proper; because they did not know when, or where, or even that it was proper for them to "*sikp*," but finding out that they are at liberty to make selections, and becoming better acquainted with its contents and arrangement, they are satisfied to let it remain as it has been furnished to them, and are opposed to rejecting or discarding any article from the bill, because it may not, under circumstances, have agreed so well with their powers of digestion. It is among this class that we must expect to find, and do find, our most scientific and best practical physicians—men who are soundest in judgment, freest from prejudice, most liberal in sentiment, and who take a common view always, as the best view of things. Such men find the lancet as efficient for good, and as potent for evil, to-day, as it was ten, twenty, or fifty years ago, and the same of calomel, tart. emetic, &c., and if in their use, they should fail to accomplish the objects and purposes intended, the failure will be attributed to the true cause—the want of a proper application and use of the remedy. There are others, again, who, by the time and even before they have gotten through with the *bill*, either from fastidiousness of taste, from feebleness of digestion, the loss of appetite, or a surfeit from the too free and liberal use of certain articles in the bill which they desire to have changed by striking them out and substituting something better suited to their appetites and tastes. They have gone out among the foreign restaurats and cook-shops, and found a few fancy articles in the establishments of Hahnemann, Doctor Thompson and Graeffenburg (institutions which appear to be under the peculiar fostering care and protection of the legislature of Alabama) which they wish to have inserted in the bill of fare, in lieu of the rejected ones. Now, I do not wish you to consider me as belonging to the "Hard-shells," or so "old Foggyish," as to be opposed to all progress and reform, especially as I am willing to adopt the sentiment of your journal, "*Je prends le bien où je le trouve*," provided we confine our researches to the legitimate domain, and do not have to descend *too low* to get the good; nor do I consider all movements as a sign of progress, as we may discover in the motions of a sea-crab, whose *progress* is generally *backwards*. And so it is with most of the physicians of this class; having neither conceived or adopted any well digested and reliable opinions, as their own, and having no fixed rule or principle of action, and as little



confidence in their own judgment and the efficacy of the remedies which they use, they are perpetually shifting their ground, advocating a doctrine or a theory one day which they combat the next, extolling a remedy at one time and denouncing it at another, but always "*au fait*" and well posted in all new inventions and discoveries, but never make any themselves. These are they who have endeavored to bring into discredit the lancet, calomel, and other valuable remedies, and attempted to foist upon the profession, as their substitutes, such articles as aconite, phosphorus, and bryonia. No, no! call me Foggy—call me Hard-shell; but let me not *progress* in that direction. Give us what you please, gentlemen, but do not compel or ask us to discard or strike from the bill, our *first principles*, as our "backwoods" friend termed his *bacon and greens*. There are yet others who have labored to get through the *bill of fare* as it has been served up for us by the *old fathers* in physic, but have not succeeded, for the reason that they have seized with too much avidity upon a *single* article, which they could not be induced to relinquish until they had gorged themselves beyond satiety. To this class belonged the famous Doctor Sangrado, who, though he may have but few disciples, so far as blood-letting is concerned, in the present day; yet there are plenty of Sangrados in many other respects besides that of blood-letting, and if their work is to be judged of by the same rule, namely, the number of widows and orphans in Valladolid, it might be a difficult matter to determine which had been the most successful, the ancient or the modern Sangrados. The means used by each, though somewhat different in character, in principle have been about the same; for while the Sangrados proper effected every thing with the lancet, others have been about as successful with emetics and cathartics, upon the principle that man, like a gun-barrel, only required to be kept well washed out, to keep him in good shooting order; and if one washing was not sufficient, it was only necessary to give him another, and so on, to the end of the chapter. Others, again, have gone upon the principle, that man had no room in him for more than one disease at a time, and straightway they commenced crowding *in* one, which they thought they understood, for the purpose of crowding *out* one which they knew little about; and so calomel has had its day, and so things have gone on, up to the time of the discovery and introduction of quinine into practice, when all the little Sangrados, acting upon the advice which the

immortal Gil-Blas gave to his illustrious prototype, resolved to "change their method" and "prescribe chemical preparations, whatever might be the consequences," have united in one grand league, constituting the present Sangrado family, who see every thing through the medium of *periodic spectacles*, and who have such strong faith and confidence in the *anti-periodic* and *sedative* properties of the article that it would not be surprising if we were to hear that they had offered to stop the oscillations, and to *depress* and keep down the sawyers in the Alabama and Mississippi rivers—one effect, however, has evidently resulted from the change, namely, a positive reduction of the number of widows and orphans in Valladolid. But what is to become of those Sangrados who have "written a book"? They must either acknowledge themselves "disabused," or fight it out, as Gil-Blas did; and let nobles, clergy and people perish, but not their reputation.

Now, if it is seriously charged and maintained, that the introduction of quinine into practice constitutes an era of improvement and progress in the healing art, I would reply, that it is but a triumph of chemistry, and that its active and valuable properties were known and appreciated by the profession long before its discovery, (in the substance of bark) which they liberally used, and that its discovery has developed no new principle of general or special pathology; and that while its introduction has had the effect of facilitating the cure of malarial and periodic diseases generally, and of drawing the attention of the profession from the use of other valuable and powerful remedies and diminishing the chances for their abuse, and of substituting a less evil for greater ones, if not a positive good for those somewhat doubtful, there is danger that the very facilities which it affords will lead, if it has not already done so, to repeated, if not general abuse; for so general and indiscriminate has become its application, that the pathological condition is seldom considered in connection with its use. Indeed, all that appears to be necessary now in the treatment of disease, is to know that it is *periodic*, and *pathology* may go to the dogs. Well, if you call this progress, improvement and reform, just write me down *Old Fogy*, and let *Young America* have the field.

But if you ask me, where a remedy is to be found, and how it is to be applied, for all the evils of which I complain, I will answer, that it is to be found in the medical schools and colleges through-

out the country, and especially those of the South, in which the principles of pathology should be thoroughly taught, both general and special, but more particularly the former, for the reason, that the perpetually changing character of our diseases require it, and nothing short of a long course of observation and experience will serve to supply the want or deficiency of it, as every practitioner who has been long engaged in the profession is able to testify. And being a comparatively new branch of medical science, and necessarily imperfect in its infancy, it becomes every physician, who desires or expects to see any advance and improvement made in the healing art, to throw the weight of his talents and influence in aid of its development and perfection, which will eventually raise the standard of the profession high above the reach of every species of low and vulgar charlatanism.

But would not this "consummation, so devoutly to be wished for," be sooner attained by the establishment of something like a National College of Physicians and Surgeons, which would bring together and combine the best talent from all parts of our land, and which would serve as a sort of *regulator* to all the other schools and colleges, and finally furnish us with a system of practice founded upon the most correct principles of pathology, both general and special, which would answer for every latitude and climate throughout our widely extended country? But I fear that the sectional prejudice and animosity—the rivalry and jealousy, existing among the medical schools, (which are becoming very numerous in the land, and creating a greater necessity for such an establishment, or institution,) whose province it should be to take the lead in such an enterprise, will prevent them from ever doing so. Until such a work is undertaken and accomplished, I shall never expect to see a much better state of things existing in the profession than I have described, and must remain content with being run over "*rough shod*," by Thompsonians, Homœopaths, Graeffenburgers, &c., &c., for whom I entertain a more sincere respect, than for those *physicians* who try to rob them of their *thunder*.

Having thus given expression to my opinions, as to the causes which have prevented the proportional advancement of practical medicine with the advance of other branches of the science, but which have tended rather to produce a retrograde movement in the healing art—and having ventured to suggest a remedy, or



corrective, for the evils complained of, which many, no doubt, will be disposed to regard as imaginary, and having no real existence, and that my criticism upon the present state of the profession, is but the effervescence of a morbid sensibility or of disappointed ambition, I will leave the subject, and proceed with an examination of some of those much abused and rejected remedies already spoken of, the first of which will be the *Lancet*; for the reason that it very naturally comes first in the order of remedies, according to the classification which I have adopted, namely, the "*Inflammatory*" and *Irritant*, the *Congestive*, the *Congesto-inflammatory*, and *Congesto-irritant* forms of disease. But as this subject must be reserved for my next letter, which I hope to make more interesting and instructive than the present one,

I must subscribe myself, as usual, your friend, &c.

SAML. D. HOLT.

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ARTICLE III.

*Non-Congenital Talipes.* By L. A. DUGAS, M. D., &c.

The subject of the present case is a daughter of Mr. B., of Lithonia, in this State: she was born in March 1851, and in November 1853 was attacked with Erysipelas, with which she was very ill, and remained feeble for some length of time. I am informed that she had no spasmodic affection during or subsequently to her illness; but it was observed, when she began to run about again, that she was lame. This lameness gradually increasing, its cause was observed to be in the foot, whose distortion grew more and more obvious until I saw her, in August, 1854. The case then presented all the peculiarities of a well-marked Talipes varus, the weight of the body resting upon the external margin of the foot; one only being effected.

By a sub-cutaneous incision the tendo-achilles was divided in the usual way, and a few days after, Dr. Chase's very simple and useful apparatus was applied for the purpose of gradually bringing the toes upwards and outwards. This succeeded admirably, and in a few weeks she was enabled to walk flat-footed.

It is difficult to account for the production of such a deformity by an attack of erysipelas; yet, as the cause of these distortions, whether congenital or otherwise, is still involved in obscurity, it is

well to accumulate facts on the subject. This is the fourth case of *non-congenital* talipes I have met in private practice. The others have been reported in this Journal for 1853, p. 142, and 1854, p. 210.

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*Observations on the Root of Gossypium Herbaceum, or, Cotton Plant.*  
By THOMAS J. SHAW, M. D., of Robertson County, Tenn.

*Cotton Root—Its General Characters.* It is fusiform in shape, giving off small radicles throughout its length. The size of the root varies, according to the soil from which it is produced. Its length varies from a few inches to that of a foot. When the root is cut or broken, it displays a white color; the bark is of a reddish brown; the taste is pleasant, somewhat sweet and astringent; it contains more of the latter principle than the root from which it is procured; it is very mucilaginous in its properties. The root is easily broken when dry, but the bark is quite tenacious, pulling off in strings.

This root is too well known in this country to require a lengthy description; therefore I will pass to the chemical analysis, as prepared and furnished to me by my esteemed friend, Mr. H. B. Orr, of Nashville, Tenn.

*Chemical Examinations of the Root.* The result of which, as accurately as might be determined, is as follows, to wit:

Gum, Albumen, Sugar, Starch, Tannic Acid, Gallic Acid, Chlorophyle, Iodine, Caoutchouc, Black Resin, Red Extractive Matter, Black and White Oleaginous-like Matter. The latter two abound in this plant.

*Proximate Principles.* Experiments were made with a view to the isolation of the active principle of the root, which were not altogether satisfactory; for though there was no crystalline principle obtained, as was desired, making the existence of it palpable and distinct to all; still there is evidence in favor of a principle existing in it. Time did not admit of an extended experiment in this department of the analysis. The author indulges a hope of having time to examine the active principle more minutely than he has yet done. What he has seen suffices to convince him that the medical properties attributed to it are not fallacious.

The attention of the medical profession was called to the medical properties of this root, first by Drs. McGown and Bonchell, of Mississippi; the latter gentleman by an article written in the Western Journal of Medicine and Surgery, about the year 1842, as well as I recollect. For a want of confirmation, it passed unnoticed by the profession, until the year 1852, when it was again brought into notice in an article written by Dr. John Travis, of Marlborough, Tennessee, in the Nashville Journal of Medicine and

Surgery. He reported but one case in which he tried it, and it was with entire success, restoring the menstrual flow in a short time, after an absence of about ten months.

I consider this root one of the very best emmenagogues of the *materia medica*, and I think it should be so classed. My reasons for considering it such, are grounded upon the different experiments which I have made with it, within the last twelve months. I sometimes use a decoction, and at others an infusion, but most generally a decoction, prepared thus:

R. Cotton Root, ℥iv.; Water, lbs. ij.

boil down to one pint. S.—A wine glass full every hour. This produces the most salutary effect in dysmenorrhœa; it acts as an anodyne in allaying the pain, and as an emmenagogue in aiding or augmenting menstruation; its action is very speedy; after its exhibition, in this case it produces an effect which, indeed, appears almost natural, that is, almost without pain; the patient, after its exhibition, feels but little inconvenience from pain, which soon subsides, and menstruation is immediately augmented, without acceleration of the pulse or gastric uneasiness. There are few other emmenagogues that can claim this feature.

Its action in amenorrhœa I think superior to any other emmenagogue belonging to the *materia medica*, though it would be proper to pay some attention to the general health of the patient before its exhibition. It is superior to any thing that I have tried in the way of emmenagogues. I have had cases in which I first tried the usual emmenagogues, with but little effect, (or success,) when I would determine on trying the decoction of this root, which would far surpass my expectations by acting with the most marked effect; menstruation being produced on the following day after its exhibition. All of the symptoms disappeared on exhibition of this medicine. I believe this to be the best emmenagogue that we can employ in mere suppressio mensium, where there is no other disturbance in the general health.

With the usual emmenagogues, I was enabled to produce the catamenia on a young lady, which continued for about twenty-four hours, then suddenly becoming very sparse and painful; and in a few days after this period had passed, I employed the infusion of the cotton root as a means of exciting this function, which it did on the following day, a plentiful discharge being produced, which continued for five or six days. She has been regular at every period since that time, and has enjoyed good health, with the exception of a few simple attacks, which caused no derangement of the menstrual function. For about twelve months previous to the exhibition of this medicine, her health was very much impaired, but she commenced improving, and soon recovered her health. I could detail other cases similar, in which I have tried the decoction with the same effect, but I deem it unnecessary to mention its action in each individual case.



As a *parturient Agent*, I think it superior to ergot in one sense of the word, and in another about its equal, its action being about as prompt as that of ergot, and attended with much less danger. I have tried both in parturition, and found the cotton root decoction to act with fully as much efficacy as ergot. In some cases in which I have tried it, the pain was to some extent allayed, and labor promoted with as much speed as when ergot was administered. It appears to be perfectly harmless, from the fact that its action is almost unattended with pain. It causes neither gastric distress, or acceleration of the pulse; if it does, it is not perceptible; both of which are occasioned by ergot, to some extent.

I have witnessed its action in retained placenta with good effect, which was an expulsion of the mass in about twenty minutes after the exhibition of the first dose. It may be proper to say, that I gave two doses before the placenta was thrown off. I believe it to be safer as a *parturient agent*, or an *emmenagogue*, or at least as safe, as any other article of the *materia medica*.

It should have a fair and impartial trial by the profession generally, because it will prove itself worthy of the time and labor spent in its investigation. It is handy to all, and free of expense. A few trials by the profession will confirm the truth of this short essay. Give it a trial, and it will prove itself in some case of *amenorrhœa*, *dysmenorrhœa*, or probably in some lingering case of labor, which may require the assistance of medicine, to produce contraction of the uterus for the expulsion of the child. I think it worthy of the attention of the profession, in the above cases.

*Tincture of the Cotton Root as a Tonic.* There is a condition of the system in which this tincture acts as a valuable restorative. These cases are of a *leuco-phlegmatic* temperament of both sexes, but it is to the female sex that I wish to draw the attention of the reader. Where there is general bad health, accompanied with tardy menstruation, I have used it with the happiest effect; in a few cases of *emansio mensium*, caused by *anemia*, where the patient was troubled with pains in the loins and giddiness of the head, with a derangement of the digestive organs, such as *anorexia*, accompanied with an uneasy, depressed feeling at the *scrobiculus cordis*, every month, which was promptly relieved by the tincture, but not with the effect of producing the menstrual flux, which was afterwards produced by the decoction, I find it necessary to continue the tincture from two to four weeks. The strength of the tincture that I have been in the habit of using, is prepared thus:

Bark of the Root, (dry,) ʒ viij.; Diluted Alcohol, lb. ij.

Digest fourteen days, then filter and give it in ʒj. doses, three or four times a day. The tincture which I used was prepared by myself; and as I have seen no account of its use, I claim the first preparation of it, as well as the first experiment with it. My

brother, Dr. H. J. Shaw, has since tried it, with the same good effect; in fact, his experience coincides with mine throughout. In closing this short and imperfect essay, I indulge a hope that it will prove of some service to the profession.—[*Nashville Journal of Medicine and Surgery.*]

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*An Essay on some of the Distinctive Peculiarities of the Negro Race.*  
By A. P. MERRILL, M. D.

It will scarcely be deemed necessary, in treating of peculiarities, anatomical, physiological, pathological, and therapeutical, of the negro race, that we should enter upon the discussion of the science of ethnology, which has latterly engaged so much attention from learned men. It cannot be denied, however, that it involves to some extent the questions of physical and mental peculiarities, which are found to differ in different races of men, and to exercise a modifying influence over the animal and moral functions, both in health and disease; but whether these differences and peculiarities have arisen from a plurality of original creations, from the influences of accidental circumstances, or from special providences, it matters little to our present purpose. The subjects which we have undertaken to discuss, have reference merely to the existence of certain facts, in connection with the negro constitution, which so influence and control his health, and the diseases to which he is subject, as to constitute distinctive peculiarities, requiring the adoption of habits of life in health, and the application of remedial measures in sickness, differing, either in kind or degree, from those which are applicable to the white race. And these inquiries are supposed to have reference, especially, to these two races, as we find them existing in our own country at the present time, and principally in the Southern states, in the relations of master and slave.

*Anatomical Peculiarities* are conceded to exercise an important influence over physiological functions; and may, therefore, be briefly referred to here, as almost necessarily connected with the other branches of our subject. These, although sufficient in the negro, to be readily distinguished and palpable, even to the casual observer, can scarcely be considered of such a decided character, and so widely differing from other races, as to justify the broad distinction which has been drawn between different races by a certain class of ethnologists; or such as will properly authorize, of themselves, independent of other considerations, the grave conclusion that *God did not make of one blood all nations of men, to dwell on all the face of the earth.* Nor do these anatomical peculiarities lead us to expect, from any influences which they may be supposed to exert over the functions of the body, a wider difference in the character of the diseases affecting the different races, than

we actually meet with in practice. The color of the skin, and the peculiarities of the hair of the negro, however they may have been originally produced, undoubtedly serve important purposes of protection and comfort, in the climate where he is found in the enjoyment of the fullest health. They are such as are favorable to a high degree of radiation of caloric from the body, which presents to the air a constantly evaporating surface, and afford to the brain the most efficient protection from the influence of the rays of a vertical sun. The scantiness or entire destitution of clothing, which is the natural result of that improvidence engendered by a hot climate, where little other than vegetable food is desired, and where this is mostly supplied by the spontaneous productions of the soil, renders these provisions of nature essential to healthful functions, and even a comfortable existence, in his native country.

In regard to the brain, the peculiarity of the negro consists more in its conformation than in its volume; the latter being scarcely below the average of some other races of greater acknowledged intellectual endowments, although decidedly below that of the Teutonic and Anglo-Saxon races. The phrenological characteristics of the negro, are said to indicate a large preponderance of the animal over the intellectual functions; and such is the inference to be drawn, also, from an acquaintance with the mental constitution of the negro. A remarkable fact, in this connection, not generally noticed by writers, but hinted at by Agassiz, may, we think, be considered as one of his distinctive traits. Negro children are not, in general, deficient in mental quickness, and acumen; and are not unfrequently found to be precocious, and susceptible of successful instruction; while the intellect is not only not developed subsequently, as in white children, but appears in truth to retrograde, so as actually to fall below, in many cases, the developments which have taken place in the white race, even in childhood. It is not uncommon, on southern plantations, to meet with children of nearly the same ages, of both races, engaging together in childish sports and pastimes; and to notice that the negro children are equal, and sometimes superior, to their young masters and mistresses, in the quickness of their perceptions, and aptness to learn whatever is attempted to be taught them. Negro children often succeed in learning to talk in advance of the children of their master, with which they are associated; and we have found, upon a personal experiment, that they can most readily be taught, by a system of oral instruction, simple religious truths, hymns, and forms of prayer, so as to make a very creditable display of proficiency, as catechumens. The children of family servants, which are kept in close association with the older members of the white family, by whom they are apt to be much caressed, frequently exhibit such evidences of smartness, and such readiness of wit, as to afford great promise of future usefulness, in spheres of action requiring undue intelligence and judgment. With few



and rare exceptions, however, they lose all signs of uncommon talents, as they advance in years, and sometimes even become noted for their dullness. No advantage of position or instruction will, so far as we have been able to observe, obviate or retard this tendency to deterioration.

The thorax of the negro is less expanded, and his vital capacity for respiration is said to be somewhat less than that of the white man. Indeed it is said to have been proved\* that such is the fact, and that a less volume of air is respired in consequence; but this apparent defect may be compensated for, in some degree, by the greater curvature of the ribs, giving scope for greater mobility of the chest, and consequently a more perfect exhaustion and expansion of the air-cells, in respiration. This curvature causes a deeper depression of the spine, which is a constant peculiarity in the formation of the negro skeleton. The scapulæ are said to be shorter and broader, and the pelvis somewhat narrower, particularly in the male. The legs are apt to be bowed, and the heels projecting backwards. The muscles of the limbs are short and protuberant, with proportionally longer tendons. The genital organs of both sexes are more largely developed, and the breasts of the females are more conical, with a less extent of base. The nerves have been represented as being larger, and containing a greater aggregate of substance, in proportion to the amount of brain and spinal marrow; but this, perhaps, requires further proof. The liver is said, also, to be larger in proportion to other organs.

*The Physiological Peculiarities* are, in part, such as naturally result from the anatomical. Reason, judgment, forecast, and independence of character, could scarcely be the accompaniments of a brain however large its volume, in which the animal organs maintain a great preponderance over the intellectual and moral. Consequently we find, what might reasonably be expected from the anatomical conformation, that the negro is essentially a degraded being, vastly inferior to the Caucasian race, in all the attributes of spiritual existence; and only capable of improvement by many ages of contact and association with civilized nations. How far such influences may tend to the improvement of his physical constitution, and to the relief of his mental deterioration, can at present be only a matter of conjecture; but admitting that all his peculiarities of deterioration are the result of forty or more centuries of constant decline, while the interval between him and the white man, has been widened by as constant an improvement and elevation of the latter, and it must be admitted as probable, that however much may be done by mankind, toward the promotion of the civilization and christianization of the former, many thousand years must necessarily elapse, before he can be brought up to the present position of the white man. No one who has had proper

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\* Dr. Cartwright, New Orleans Journal, Vol. 1, IX, 196.

opportunities of observation, and taken the trouble to improve them, can for a moment entertain a doubt, that, of all the providential occurrences, tending to the improvement and elevation in the scale of being, of this degraded race, none could be better suited to the purpose, than the existence of American slavery. It must not be denied, that it is a system which leads to egregious abuses. Of these we are not the apologist. To his own master let every slave-holder render up his account.

No fact in psychology is better established, than the inaptitude of the negro mind to improvement. In his native country he exhibits no signs of progression. The rising generation does not aim to improve upon the past, or to profit by a knowledge of its errors; but taking the place of their predecessors, they are content with doing precisely as has been done by their progenitors for ages. If his forefathers have been accustomed to plow with the rough branch of a tree, the negro has no conception of any other method, and works on with the branch of a tree from generation to generation forever. Nor does he seem inclined to follow the example of the white man. The latter may settle near him, and plow his grounds according to the most approved modern plan, and the negro may look on and wonder; but he is not any the less willing, still, to pursue the example of his fathers, and no improvement is attempted, however promising may be its results. Such has been the stationary condition of the race from the earliest times, tending more, perhaps, to deterioration than to improvement; and there can be little hope of progression in future, while the negro is left to follow the bent of his own inclinations. His condition and history promise nothing but the extreme of savage ignorance and degradation.

By the institution of southern slavery, the negro is brought under a system of tutelage, in contact with a race vastly his superior, and of whose habits of thought and action he is constantly compelled to take notice. By every humane and judicious master he is cared for, as he requires to be, as a child in leading strings; and although he has not yet attained a degree of improvement which would seem to be commensurate with his advantages, it must be considered, that his pupilage has as yet only been a short one, and not sufficient to test his capabilities of ultimate advancement. Time may so far develop these, as to enable him to recover his lost position in the scale of being, and to carry back to his native shores the germs of civilization, and the christian religion, both to be successfully cultivated, to the enlightenment and regeneration of benighted Africa. Human research and ingenuity have not been able to devise any other available means, by which these blessed results can be secured to an ignorant and degraded people, than by the influence of long association with a superior and dominant race. History affords examples in illustration of this position, and our own experience, as well as our reason, confirms

it. It is an interesting problem, to be solved in the long and tedious future, whether the negro will, even by these means, ever be elevated in the scale of being, to a degree which will realize the anxious hopes of the christian and the philanthropist.

Other physiological peculiarities result from, or appear to be intimately connected with, the native climate of the negro. Whether so formed by a separate creation, as some contend, or adapted by long habituation, the negro race is physiologically constituted for the enjoyment of a hot climate. Living mainly, in their native wilds, upon a meagre and vegetable diet, their systems are less abundantly supplied with carbonaceous material, and have less adaptation to the generation of animal heat, than the white race in more northern latitudes. The air which surrounds them within the tropics, being much of the time of an equal or higher temperature than their bodies, and never at any time much below it, there is no necessity for an active reproduction of warmth, to replenish the moderate waste from external radiation. If it be true, therefore, that less air is respired by the negro, and a less amount of oxygen consumed, which appears to be altogether probable, it is because there is less occasion for physiological combustion; and this may be further reduced by the more rapid elimination of carbon by the liver and skin, while the copious supply of perspirable matter and proportionate evaporation from the surface, tend to prevent an undue accumulation of animal heat, from the moderate exercise of the functions whence it is derived.

The negro constitution being thus eminently adapted to the torrid region, it follows that the climate in which we find him in our country, is much too far north for him. Being exposed for a large portion of the year, to a temperature to which he is ill adapted, and liable to suffer all the while from the operation of those causes, above alluded to, which constantly tend to the reduction of the heat of his body, so sparingly supplied, he can only be protected from the evil influences upon his animal functions, and rendered effective as a laborer, by being better fed, and better clothed, and lodged, than in his native country. The changes which take place in his physiological functions, as a consequence of his sudden transfer to a colder climate, must be counteracted by corresponding changes in his mode of living, or disease and an abridgment of the duration of life, must be the natural result. This remark is, perhaps, scarcely less applicable to the white man of temperate latitudes, when suddenly transferred to the polar regions. If he neglected to conform, to some extent, to Esquimaux habits, and indulge in the use of oleaginous food, to furnish additional supplies of hydro-carbon for an increased production of animal heat, he will scarcely be able to endure a succession of cold winters, without a loss of health. The converse of this proposition is equally true. Emigrants from hyperborean to tropical regions, require, equally, that their habits of life should be charged,



and made to conform, in some degree, to those of the fruit-eating people among whom they go.

Of these physiological requirements there can be no doubt; and probably it will be found upon further and closer observation of the matter, that they are of a more urgent character with the black than the white race; for the reason, that the former is possessed of less resiliency of constitution, and self adaptation to change, than the latter; resulting partly from difference in actual idiosyncrasy, and partly from the greater reason and judgment with which habits of life are controlled. However this may be, it can hardly be matter of dispute, that southern planters who study their own interests, whether they understand the physiological reason for it or not, have found from long experience and observation, that it is good economy for them to give their slaves a full allowance of fat pork, and also of Indian corn, which abounds in oleaginous principles wherever it is grown, although to a somewhat less extent in hot than in cold climates. Every slave in the southern states, who has had opportunities for judging, is aware of the greater strength of diet afforded by northern, than by southern grown corn; and of the certainty with which the former will degenerate into the latter by a few years of southern cultivation. Southern corn is always preferred by them, however, on account of its greater palatableness, and lighter color. And it seems to be a providential circumstance, that the whole region of country in which slave labor is profitable, is particularly suited to the production of the two main articles of diet upon which they subsist, corn and pork. The former alone would afford them a stronger diet, yielding them larger supplies of hydro-carbon, than most of the tribes of Africa can command in their native country; and perhaps it may have been a knowledge of this fact, added to the cheapness of the food, which tempted the original planters of Louisiana, to rely almost exclusively upon Indian corn in feeding their slaves: while they were content to clothe them in the coarse linen goods of that period, as affording a much better protection from the weather, than they had been accustomed to in their barbarous homes. But when some of the large sugar estates fell into the hands of Northern men who had been accustomed to see the white laborers of the north much better clothed and fed, and performing more effective labor in consequence, the natural result was a trial of the experiment upon negroes; and the large increase of the product of their labors, consequent upon this change, soon caused a complete revolution in the system of plantation supplies, leading to a better provision for the slaves from year to year, until, at the present time, they are probably better fed, and better clothed, than are the white laborers in any part of Europe.

Still, certain errors are committed by planters, for the want of a proper understanding of these physiological peculiarities of negroes, adapting them to hot climates. The winter being the season

of comparative rest, as the crops are not then growing, to require extraordinary efforts at tillage, it is the custom of some, to afford their slaves less liberal supplies of meat at this season than at any other; when, if the views above given are correct, they require more of fatty and hydro-carbonaceous food in cold weather than in warm. On sugar estates, during the sugar making season, this want is in part supplied by the free access which the slaves have to the juice of the cane, and its products. Its physiological effects become apparent in the high degree of health and vigor which is maintained, in spite of the extreme labor imposed by this perpetual day and night process of sugar-making, out of which the slaves come with an increase of *embonpoint* and buoyancy of spirits. These invigorating and fattening effects of saccharine food, are said to be more perceptible upon the constitution of the negro than the white man. The amount of hydro-carbon furnished by it may, in many cases, be greater than can be obtained by the use of cod-liver and other oils, which cannot always, on account of their indigestible and cathartic qualities, be taken in sufficient quantity to produce these legitimate effects. As a remedial agent, therefore, in phthisis, scrofula, and cachexies of various kinds, saccharine matter is of no mean importance.

The inability of the negro constitution to generate heat, commensurate with the increased want of it, consequent upon the drain imposed by exposure to unusual cold, is manifest in its effects upon the respiratory organs; which, from exposure to cold air, without sufficient covering for the body, suffer from a constriction and chilliness, which are frequently quite painful. This it is which induces the negro, contrary to the common practice of the white man, to turn his head towards the fire, or to cover his face with a blanket, in preference to his feet, that the air inhaled may first be partially warmed, and thus save him the inconvenience of its chilling effects upon his lungs. Place him in a warm room, with plenty of warm bedding, and he will soon learn to omit this injurious habit, which deprives him of the fresh and uninspired air, so much required by him as a source of vitality, and of vital warmth. The same want of due supplies of animal heat is evinced, when negroes are required to sleep in the open air. Upon a hunting excursion, or a military campaign, white men will often inure themselves to the rapidly sinking temperature of the surface of the earth, and sleep with impunity without the interposition of anything to prevent the rapid radiation of heat toward the clear canopy of heaven; but if their negro servants who may accompany them, partake of the same exposure, they not only show signs of greater suffering, but the effects are apt to tell upon them, in the development of fevers, and of thoracic congestions and inflammations, not unfrequently laying the foundation for permanent ill-health. It is only in our hottest summer weather, or in inter-tropical climates, that negroes can undergo these exposures with

impunity. Indeed, we have but few nights in the southern states, which would not prove injurious to the negro sleeping in the open air, and particularly by the chilling effects of terrestrial radiation of heat upon the temperature of the atmosphere, toward morning.

Many of the diseases to which slaves are peculiarly liable, and which form the principal outlets of life among them, are caused by a want of proper attention to this high requisition of their organisms for heat, and by the want of proper supplies of fresh air, consequent upon the efforts which they are called upon to make, to relieve their bodies, and particularly their lungs, from the painful influences of cold. It is a great mistake, we apprehend, to suppose, that because negroes are often found sleeping with their cabins closed, and their heads covered, they do not require fresh air. It is not animal instinct which impels them to forego its use, but want of comfort. Let them be rendered comfortable, by due supplies of warmth, or the means of preserving the warmth of their bodies, and they will be found to enjoy the full respiration of fresh and wholesome air, not less than white persons. And it has seemed to us, that it is mistaking effects for causes to contend, that the elimination of an undue proportion of carbonic acid, by means of the skin and liver, is certain proof that nature has intended these organs to act as greater depurators of the blood in blacks than in whites. Whenever they do thus act, as is no doubt often the case, it is compensatory for defective action by the lungs, just as an increased action of the kidneys, in all persons exposed to the chilling influences of a cold and damp atmosphere, is compensatory for partially suppressed perspiration; and it remains to be proved, that the decarbonizing power of the skin and liver of the white man, is not just as active and efficient, under the same influences, or any other influences retarding the action of the lungs to the same extent.

To guard against disease from this cause, it is necessary that, in providing lodgings for slaves, great care should be taken to supply them with both ventilation and warmth. It is important that in winter the two should be furnished in combination; and probably there is no better way of doing it, than by constructing their lodgings so as to be warmed by hot-air furnaces, through which air both warm and pure may be supplied in abundance. Upon large plantations, where the saving of fuel is an object, this might be done, were the dwellings properly arranged for it, at less expense than the same advantages could be secured upon any other plan; and there are few nights in the year, that the planter would not find it his interest to kindle fires in such furnaces. The time lost by negroes in unnecessary sickness, and the cost of medicines and medical aid saved by such arrangement, not to mention the increased average duration of life, would amply repay the expense.

Many slave-owners, deeming it important to give their negroes a full supply of fresh air, without considering the importance of



warmth, construct their dwellings with openings in the loosely laid floor, and with crevices between the logs or planks which form the walls of the buildings, so that whether the room contain few or many, there is no possibility of any one individual occupying a position, which will not subject him to the constant action of a current of cold air. This induces him to sleep with his head covered, to avoid the painful constrictions caused by cold inhalations, and thus subjecting himself to the injury resulting from breathing impure air, even though his room be ever so well supplied with it. Full one half of every inspiration is made up of air which has been respired before, and the fresh air with which the dwelling is so liberally supplied, answers no other purpose, than to chill the surface of the body, and the extremities, turning in upon the vital organs that mass of fluids, and vigor of circulation, which are required for the healthful action of the cutaneous vessels. The fluids and vascular action thus repelled, lay the foundation of a large portion of those diseases which prove fatal to slaves.

But it is not impracticable to secure warmth and ventilation, to a healthful extent, by building close and warm houses, with glazed windows which can be opened at the top, near the ceiling of the rooms, while the lower portion is closed; and by warming the rooms by means of large, open fire-places. A plentiful supply of warm blankets, and the enforcement of a wholesome rule, to undress on retiring to bed, and lay aside the clothing worn during the day, will secure the occupant of such an apartment a free respiration of pure and warm air, a free action of the skin and viscera, and a great degree of comfort and health. The negroes will be enabled to warm and dry themselves immediately on their return from their daily labors, and thus avoid being chilled after exercise and exhaustion from fatigue. They will lay aside the clothing worn during the day, to be aired and dried in readiness for the morning. They will sleep without tight bands about them, and without obstruction to cutaneous exhalation. They will have no motive for covering their heads in their blankets. They will enjoy the benefit of tolerably fresh air, without danger of being chilled by its impinging directly upon their bodies. They will enjoy unbroken slumber, and be invigorated for the labors of the ensuing day; and when they rise and go forth, into the cool air of early morning, it will not be with bodies chilled by cold, or reeking with moisture.

The selection of a healthful locality for negro quarters, is a matter of not less importance than their proper construction. It is a common practice, upon the highlands, to give preference to some worn-out or barren hill, or ridge of ground, which produces little or no vegetation, and is, therefore, of little value for purposes of cultivation. And upon the low-lands, where there is no want of fertility and productiveness, the plan often pursued is, to keep the earth around the quarter nearly bare of vegetation. These prac-

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tices are followed without reference to, or in accordance with, what we consider false views of the causation of disease by telluric influences. From long observation and experience in this matter, we are forced to the conclusion, that it is from the bare and naked earth that we have most to fear in this respect. Nature appears to have intended that the earth, or at least the habitable portions of it, should be coated over with vegetation. Accordingly we find, that when it is thus coated by the forests, by the luxuriant grasses of prairie grounds, by cultivated crops, &c., a healthful influence over the inhabitants is exerted. But whenever these natural coatings are removed, from any cause, bringing the bare surface to the long continued action of the sun and winds, sickness is nearly the invariable consequence. For this reason negro quarters should be established upon a fertile soil, or one which can be rendered so by cultivation, which should be sedulously shielded, as in a state of nature, by a luxuriant growth of vegetation of some kind. This is in accordance with common experience. In some parts of Mississippi, where the virgin soil has disappeared from the substratum of yellow clay, upon which it reposed, and the fields have been abandoned, and become washed in gullies, and bared of vegetation, sickness, and particularly malarial diseases, prevail to a much greater extent than formerly when these grounds were exceedingly rich in vegetable mold. The same necessity for a coating of vegetation exists when the bare surface of the earth has been exposed, in consequence of the subsidence of stagnant water, the drainage of swamps, &c., which very generally exert a deleterious influence until covered by a dense vegetable growth.

The health of negroes is scarcely less dependent upon proper clothing, than suitably arranged dwellings. The color of the skin is favorable to the radiation of heat, while the head is protected from the influence of the direct rays of the sun, by the non-conducting character of its woolly covering. While these and other constitutional peculiarities serve to qualify him for enduring the heat of a tropical climate, and a vertical sun, they disqualify him proportionally, for a cold climate, and for great and sudden transitions of temperature from heat to cold. They are, moreover, from a want of resiliency and native vigor of constitution, less able to adapt themselves to changes of climate, than white men. These truths are so universally acknowledged, as to require neither argument nor illustration in their support. Consequently the slave population of the United States, occupy a region by many degrees too far north, for the enjoyment of health and long life, without having their bodies specially protected from the depressing influences of cold, and from the influence of vicissitudes of the weather, in our capricious climate. The winter season is particularly trying to them, and apt to be productive of the most common and fatal class of diseases to which they are subject. It must be evident, therefore, that the selection of proper clothing is

among the most important considerations in connection with plantation hygiene. And such is now the cheapness of the coarse kinds of goods most suitable for this purpose, that no good reason can be given for neglecting to clothe them in a manner most conducive to the preservation of health. The danger of the loss of health and life, the loss of time, and the expense of medical aid, and of medicines, arising from a want of proper protection by warm clothing, is much more detrimental to the interests of planters, than the most expensive arrangements, in reference to this matter, which are adopted by the most considerate and liberal slave-holders.

Since cotton goods have become cheaper than those made of flax and tow, the materials used for negro clothing are almost exclusively composed of cotton or woolen, or a combination of the two. The coarse cottons commonly used, are well adapted to this purpose for summer, and, with the exception of old and infirm persons, negroes do very well with an exclusive use of such cotton goods for about seven months in the year—from April to November—but for the other five months it is safer, and good economy, to provide all who labor in the open air, and are subject to the vicissitudes of the weather, with woolen shirts. The old and feeble should wear them the whole year, and with the addition of woolen drawers in the winter. In all sickly localities, indeed, it is better that this arrangement should obtain with all: for it has been well ascertained, that the use of flannel next the skin all the year, affords the most certain protection against malarial diseases, of any means known, excepting, perhaps, the daily use of quinine; and it is reasonable to conclude, that its prophylactic agency is more decided with negroes, than white people, on account of physiological peculiarities to which we have referred, and particularly with negroes living in a climate of unnatural coldness. It is, indeed, a rare thing, according to our experience, to meet with a violent case of fever, cholera, or other malarial affection, so called, in a negro who habitually wears flannel next the person, and particularly if he sleep with a woolen covering at night, and in a cabin properly warmed and ventilated. Contrary to the common practice of planters, children and youths, for obvious reasons, require suitable clothing, and nightly protection, much more than grown persons.

There is no one article of clothing, perhaps, which is more necessary to the health and comfort of field negroes, than the overcoat. This is made of various coarse materials, and sometimes of thick blanket cloth, with a hood to be worn over the head at will, which is a necessary appendage for those who are not supplied with hats or caps. These over-coats or capots, are useful in the cool of the morning when starting out to work. The negro is roused from his slumbers at early dawn. Perhaps he has been sleeping in a close room, with his head enveloped in his blanket,



and he goes directly into the cold morning air with his skin reeking with moisture. His stomach is empty, and the general languor which prevails predisposes him to chilliness, and a repulsion of fluids from the surface upon the internal organs, to an extent well calculated to excite disease. In point of fact, we believe it is true, that a large proportion of the attacks of diseases in the autumn, and winter, come on, or become developed into notice, at this time. In cotton-picking and some other kinds of labor, a thorough wetting of the clothing takes place, and is kept up for some hours, until the time for breakfast, when that meal is taken in the open air, and sufficient rest allowed, to produce a pretty general chilliness of the surface of the body. In view of these physiological peculiarities of the negro, which tend to unfit him for the endurance of cold, no one can doubt, that this exposure is a trying ordeal for him, and that he requires all the protection that clothing can give. At no time, except while sleeping, does a negro require warmth and dryness more, than when resting and eating his meals in the open air, and after active labor. While in the full excitement of exercise, the wetting he receives from the dew, or from the rain, is of little consequence; but the moment he ceases to act, he is in danger of suffering constitutional injury, and unless particular care be taken to guard him against it, disease, and often fatal disease, will result from it.

We have already alluded to the fortunate, if not providential, fact, that the two articles of diet upon which our slave population are mainly subsisted, and which are the best adapted to their physiological condition, of all the long list of eatables known to man, are produced in high perfection, and with moderate labor, in all that region of country where slaves are owned and worked. Indian corn may be cultivated upon both sugar and cotton plantations, in sufficient quantity for plantation use, without interfering, in any material degree, with the amount of cotton or sugar produced. This article is easily preserved, and affords food for slaves, not only of the most nutritious and wholesome character, but requiring little labor and skill in the preparation. In general it is furnished to all the negroes on the plantations, *ad libitum*. There are two points in connection with its preparation, however, which, perhaps, are not sufficiently attended to. One is in reference to the grinding. It should not be ground to an impalpable powder, which makes heavy, moist, and soggy bread; and this it is which constitutes the principal difference between the corn bread of cities and plantations. Steam and water power are brought into requisition for the former, and corn meal is met with in their markets in a state of levigation equal to that of wheaten flour; but plantation grinding is more commonly done by horse power, with less perfect machinery, and the meal is of much greater coarseness. The other matter of importance is the cooking. Corn meal requires to be very much cooked, and with a

high degree of heat: the more, of course, when not finely powdered. Water and salt are the only admixtures required.

Pork, the other article of diet alluded to, is easily and abundantly produced, under skillful management, in all that region of country in which Indian corn best flourishes; and the best qualities are fattened on southern grown corn. The large amount of pure fatty matter which it contains, is an abundant source of animal heat, so much required by the negro in a climate of lower range of temperature than he is suited to. In his native tropics it would be injurious, but when removed into what is to him a cold climate, such oleaginous food becomes as essential to his health, as is the blubber diet to the Esquimaux and the Laplander. The unsuitableness of oily pork to people of hot climates in their native regions, may be the true physiological explanation of its interdiction to the Israelites by divine authority. The constitution of the ancient Jews was very unlike that of the negro. His temperament being more sanguine, and ended with a higher degree of nervous excitability, and a greater exuberance of vitality, the generation of animal heat was proportionally more rapid. Of course, the leaner meats of the goat and the sheep, with the fruits, the milk and the honey, which abounded in Palestine, were better suited to his physiological condition.

But whether this be true or not, true it certainly is, that the fattest pork suits the negro in our country better than any other meat. Upon no other can he be subsisted, with any hope of returning to his owner such large profits of labor. The farther north you go with him, and the colder the climate to which he is exposed, the greater is the necessity for this oily diet; and without a full abundance of it, the negro not only cannot become an effective laborer in cold climates, but must necessarily suffer in his bodily and mental health, become short-lived, imbecile, and unprolific. Too feeble-minded to compete with white men in his struggle for a livelihood, and too improvident to provide, in the heat of summer, for the requirements of winter, he is reduced to the necessity of subsisting upon unsuitable food, and often compelled to wear insufficient clothing; and disease of body and mind, leading to early dissolution, and to deterioration in the bodily and mental vigor of his descendants, are the natural consequences.

In addition to meat and bread, slaves require milk, garden vegetable, ripe fruits, and sugar or molasses. For adults, sour milk or clabber is most digestible. Garden vegetables, are liberally supplied on all well conducted plantations. Figs are the most valuable fruit, not only on account of their easy digestion, but of the abundant saccharine matter they contain, and not less because of the fact, that they cannot be eaten in an unripe state. Sugar or molasses should be looked upon as essential, to the improvement of digestion, and on account of their anti-scorbutic

tendency; and liberal supplies of good vinegar should be furnished, for like reasons.

The negro is, from nature and habit, an uncleanly being. From early infancy to old age, his skin is rarely cleansed of accretions of perspirable matter and dirt, which accumulate so readily upon it, aided by petty copious sebaceous secretions of an odious character. The injurious effects of this habit might easily be prevented, by the construction of artificial ponds or tanks, for the special purpose of bathing. The moderate warmth of water thus confined, would afford an inducement for them to practise ablutions at night. Even the habitual application of oily substances to the skin, would be an improvement upon the present neglect of the cutaneous surface. It would, perhaps, be a poor substitute for bathing; but the cuticle would be softened by it, facilitating excretory action, and preserving a free capillary circulation.

In a state of health, with proper food and clothing, and with suitable lodgings and means of rest at night, the negro is very enduring of labor, and will work at a certain slow and regular pace, with few and short intervals of rest, from early dawn until night, in the long days of summer. But he cannot be driven, for any length of time, beyond his natural or habitual movements; and any attempt to do it must always result in ultimate loss to the master. Up to his natural capacity he is not unwilling to work. Beyond it he cannot go without injury. When he is overworked, and becomes exhausted and disordered in consequence, he recovers from the effects much more slowly than the white man; as he does, also, from sudden prostration by blood-letting, and the action of medicines. His reasoning faculties are dull and inactive, and his judgment defective, but he learns to do his work skilfully, and from long practice becomes very adroit in the use of the implements of husbandry, and the tools of the mechanic; but his attention must not be directed to more than one thing at a time, and he needs to be particularly instructed upon every change in his daily tasks. Counseled and dealt with in a spirit of kindness, and patiently directed in his duties as a child, he is easily ruled and governed by white men, to whom he concedes a high degree of mental superiority and judgment; but becomes restless, and oftentimes depressed and sulky, under an exercise of impatience, and undue severity, on the part of his master or overseer.

Vascular and nervous action in the negro is comparatively sluggish, but his senses of seeing, hearing, and smelling, are apt to be acute and active; those of touch and taste, obtuse. He requires less sleep than the white man; has greater insensibility to pain; is warm, but impulsive, in his affections; suffers deeply, but not enduringly, from affliction; is strongly imbued with religious and superstitious feelings; a great lover of music, apt at the production of musical sounds, and at vocal imitations; and when uninfluenced by superstitious fear, he is courageous and stoical.



His mind is continually exercised upon supernatural agencies, is easily depressed by his confidence in witchcraft, and much of his unhappiness, as well as many of his diseases, proceeds from purely imaginary causes. He venerates age, but mingles with his veneration a superstitious dread of the control, which the aged are supposed to possess, over spiritual and ghostly influences; often assigning disease and misfortune solely to these agencies. In his religious devotions, he finds it an easy matter to work himself up to the highest pitch of enthusiasm, and even ecstasy, realizing in his excited imagination the felicity, almost, of the heavenly state; but the rapid subsidence of the excitement leaves him in the practice of certain vices, to which he is impelled by passion and habit; and from which, under temptation, he is scarcely able to refrain. The venereal excitement is one of these, to which his anatomical and physiological constitution strongly inclines him, and to the promiscuous indulgence of which he is apt to be led, by the habitual disregard of the sanctity of the marriage relation, and the wickedness of its violation. Another vice to which he is addicted, is theft; in which he indulges, with the exercise of the most ingenious expedient to escape detection, traveling sometimes many miles during the night, after a hard day's work, and with the prospect of another hard day's work before him, on the morrow, to accomplish a theft of little value to himself, and one which affords him very small remuneration for his labor and risk.

Thoughtless of the future, and improvident to a degree, the negro stands constantly in need of counsel and advice, and he is ever ready to place himself under the guidance and instruction of the white man, the superiority of whose judgment and intellect he is always willing to acknowledge. This trait of confiding dependance in the negro, is not less remarkable and uniform, than it is in the children of the white race; and the treatment he requires in return, to make him contented and happy, is the same that our children look for at our hands. In a spirit of parental kindness, he may, in general, be governed and worked to the best advantage, and his attachment and devotion to his master, when so managed, know no bounds. We have heard of an attachment which will induce a man to die for his friend; but if we were to look through the world for practical illustrations of this remarkable virtue, among no class of people would we as soon go, as among slaves, who have been reared up in immediate association with the members of the white family to which they belong, and who have been governed as children and dependents, in a spirit of kindness.

But slaves are submissive, and effective laborers, under very different treatment. They submit to and bear the infliction of the rod with a surprising degree of resignation, and even cheerfulness; and indeed manifest in many cases a strong and unwavering attachment to the hand which inflicts the punishment, particularly

if it be the hand of the owner, or some person who has the right to exercise government over them. They are a submissive and yielding race, wholly incapable of bearing malice on account of their degraded condition as slaves; and equally incapable of forming and maintaining, an effective and permanent organization among themselves, to assert their freedom, or to avenge their wrongs. They differ from their white masters in no one particular more than in this. Most of them, perhaps, desire their freedom, but when obtained, they know so little how to use it, and stand so much in need of the direction of the thinking and reflecting white man, as to become wretched and miserable, and often to desire a return to the state of slavery. Whether this be his rightful position in our country or not, an unprejudiced observer can hardly fail to arrive at the conclusion, that it is the one above all others, in which he enjoys the highest degree of health, the greatest happiness, and the longest life.—[*Memphis Med. Recorder.*]

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*On White Swelling.* By M. A. RICHEL.

M. Richet believes that many erroneous ideas prevail respecting the pathology of articular diseases, which has been retarded by the uncertainty that has so long prevailed in respect to certain points of structural anatomy—as, e. g., the vascularity and nutrition of the cartilages, and their investment with synovial membrane. The microscope has now led to the solution of these questions, and, by availing himself of the results of its teaching, M. Richet believes that he can steer clear of many of the difficulties that beset the path of earlier pathologists. His own researches date some time back, he having published upon the subject of white swelling in 1844.

While approving the mode adopted by Brodie and Velpeau, of viewing these affections through the pathological changes they give rise to, he believes that they and other writers have not sufficiently followed the succession of these changes as they are observed in the different tissues. His object is to supply this deficiency, in showing that the different stages of the same chronic inflammation have been mistaken for special affections. He believes that all “white swellings” may be included under two fundamental varieties—viz., chronic inflammation of the synovial membrane and of the articular extremities of the bones. The changes which take place in the fibrous tissues are, as Brodie has advanced without demonstrating, always consecutive, while ulceration of the cartilages is not admitted by M. Richet. The synovitis, osteitis, or osteo-synovitis, may undergo modifications, by the constitution and temperament of the individual, or by the causes that have induced them, such modifications being of the more importance, inasmuch as they often affix a special seal to these affections, causing them to be regarded as distinct maladies.

*The Pathological Anatomy of White Swelling*, constituting the basis of the essay, is given in minute detail; but we are only able to glance at some of the more salient points. M. Richet has, during several years, taken every opportunity offered by cases of arthritis or experiments on animals, of tracing the progressive changes that take place in the *synovial membrane*. Between the fifth and twelfth day after irritation has occurred, a pseudo-membranous-like exudation is effused from its surface, and becomes attached to granulations that are there more or less developed. When the chronic stage of synovitis arrives, these granulations may expel the false membrane covering them, and become themselves developed into fungous vegetations; or the pseudo-membrane may become more and more intimately united to the surface of the synovial membrane, undergo organization there, and prevent the farther development of the granulations. The two cases are respectively termed by the author—*Fungous Synovitis*, and *Pseudo-Membranous Synovitis*.

In *Pseudo-Membranous Synovitis*, layers of pseudo-membrane, intimately connected with vessels, unite the synovial membrane to the fibrous tissues of the joint; and when sufficient irritation is not induced to cause death or amputation, a natural cure may take place through the agency of a fibrous transformation. Retraction ensues, and all the soft parts becoming closely applied around the ends of the bones, the joint then appears less than the opposite one. This form of synovitis is not infrequent after acute rheumatism, and it constitutes one of the varieties of incomplete ankylosis.

In *Fungous Synovitis* the granulations, in place of becoming organized, become, under the influence of a special diathesis (as e.g. the scrofulous,) œdematous and fungoid, and are, after different periods in different individuals, converted into reddish, softish vegetations, analogous to those which spring from carious bone. Containing some arterial vessels, they are chiefly made up of a venous network, in the midst of which is found a translucent jelly, exhibiting small spots like extravasated blood. The vegetations present an epithelial layer at their surface, and within the fusiform fibres and elongated nuclei characteristic of fibro-plastic tissue. Brodie and other pathologists, from want of having sufficiently studied the alterations of the synovial membrane, have made of this a special affection, of a malignant nature. Occasionally, it becomes arrested in its course, a conversion of the fungosities into fibro-cellular tissue taking place, and a more or less complete ankylosis ensuing. In other cases, the fungosities become indurated, having cartilaginous plates diffused amidst their tissue. This induration is, however, only observed here and there, amidst the thickness of the changed synovial membrane, and gives rise to the development of irregular, so-called foreign, bodies, varying in size and density, being sometimes found loose in the joint, or only attached by a pedicle.

Brodie admits primary *ulceration* of the *synovial membrane*; but the cases he adduces are too briefly narrated to justify the appella-



tion. In M. Richet's opinion, the most frequent sources of ulceration are small centres of suppuration, met with in the altered synovial membrane, which, by breaking both externally and internally, establish sinuses, the extremities of which have all the characters of ulcers. The synovial membrane may also become ulcerated consecutively to the morbid changes taking place in it, while, when much distended with fluid, a sudden movement may cause its rupture.

The *Fibrous Tissues* are endowed with a very feeble vitality. The author's researches lead him to regard the ligaments as insensible, although, as their insertions into the bones are continuous with periosteal or osseous tissues, tearing or stretching these may cause pain. By no experiments has he been able to induce inflammatory action in the ligaments or capsule, even when the synovial was quite red, and the joint full of pus. When, in exceptional cases, they do become somewhat reddened, it is not the redness of inflammation, and it is almost always consecutive to lesions of surrounding tissues. One of the changes most frequently met with is a puffiness of the capsule and ligaments, produced by serous infiltration into the inter-fibrillary cellular tissue which separates the ligamentous fibres, these assuming, also, a dull tarnished appearance. This relaxation allows of great separation of the articular surfaces. At a later period, the fibrous parts become hypertrophied, or even indurated.

*The Articular Extremities of the Bones.*—M. Richet believing that, however well *osteitis* in general has been described by Gerdy and Miescher, the form that affects the spongy tissue in the vicinity of joints is imperfectly known, describes it, from his own observations, with a minuteness that defies our following him. It must suffice to say, that he admits three stages of primary osteitis. In the *first* of these, a section of the bone presents a vascular surface and enlargement of the cells, its compact surface being pierced with numerous minute holes for the passages of vessels. The secretions of the periosteum become diverted to the surface, and the bone is increased in size, in consequence of new layers deposited at its surface, as well as by the enlargement of its cells. Although such enlargement of bone is not admitted by Crowther, Russel, and S. Cooper, M. Richet has proved its existence by admeasurement, after separation of the soft parts. In *primary* osteitis, periosteal effusion is, however, not constant, occurring only as the inflammation approaches the surface; but in *secondary* osteitis, it is the earliest change observed. In the *second* stage, the red colour is concentrated at certain points, little collections of blood taking place. The cells become more and more spacious, and true abscesses are formed within the bone. Sometimes, however, hypertrophy of the inter-cellular parietes leads to a diminution in the size of the cells, and the spongy tissue is resistant instead of yielding. In the *third* stage, the pus which had been infiltrated into the cells destroys the

vessels, and the lamellæ, deprived of nutriment, become necrosed. At other times, ulceration, terminating in caries, occurs, and bleeding fungosities, or vegetating granulations, spring from the cells. Sometimes the cartilage is perforated only in places, at the bottom of which bleeding vegetations are seen, an appearance mistaken by Brodie and others for true ulcers.

Arrived at this stage, it is rare for the osteitis to be confined to the articular extremities, and, on cleaving the bone, the entire medullary canal is found to exhibit an intense redness throughout its entire extent, while small sanguineous effusions, and the other phenomena of the early stage of osteitis, are observed at the other extremity of the bone, although externally this exhibits no evidence of the change.

*Consecutive Osteitis.*—As synovitis may be secondary to an osteitis, so this last may supervene upon a synovitis. An *osteo-periostitis* so produced differs much from an osteitis properly so called, there not being the enlargement of the cells or the vivid injection of the spongy tissue, with its purulent infiltration. It is the periosteum which undergoes the chief alteration, the bone, at a later period, undergoing hypertrophy even to its centre. It is, however, the cartilaginous surface that chiefly suffers, the synovial fungosities rapidly leading to its perforation and destruction, and entering into immediate relation to the bone. The compact lamellæ become necrosed, and the pus penetrates into the spongy tissue, inducing more or less deep-seated changes. Vegetations are often found within the cells; but beneath the fungosities the intercellular lamellæ are found more resistant than normal, while in primary ulcerative osteitis they are softened. Consecutive osteitis is a less refractory disease than the primary, the articular surfaces sometimes becoming covered with fibrous tissue that allows of some movement.

There is another change in the bone which, although not rare, has not been described, and to which M. Richet considers no better appellation can be at present applied than *fatty degeneration*. A few spoonfuls of a sero-sanguinolent or purulent fluid are found in the cavity of the joint, the synovial membrane not exhibiting changes proportionate to the symptoms observed during life. The articular cartilages are eroded, thinned and perforated by a great number of minute apertures. On raising them, which is easily done, a large layer of blood, having the colour and consistence of currant jelly, is found interposed between the spongy cells and the thinned compact lamellæ which is detached with the cartilage. On sawing the bone, in place of finding the cells more or less inflamed and gorged with blood and pus, the section presents a yellow color, deeper as the centre is approached. The cells are enlarged, and pressure by the finger produces slight crepitation, and expels a quantity of yellowish oily fluid. No trace of the smallest vessel can be found amidst the spongy tissue. The medullary canal is abundantly filled with this yellow fluid. The periosteum is not in-

flamed, no trace of the vascularity seen in osteitis existing, while the size of the bone is diminished rather than increased.

*Changes in the Articular Cartilages.*—M. Richet regards cartilage as possessing a very rudimentary organization, coming between fibro-cartilage and the products of epidermic secretion. Its mode of life is, as it were, parasitical, living by absorption of the liquids amidst which it is placed, its component utricles or cells operating osmosis. To the question, whether the articular cartilages are susceptible of inflammation, and of participation in the diseases of surrounding parts, M. Richet replies in the negative. By no experiments can vascularity be induced, and no attempts at reparation are found after old injuries. Amidst the completest change in surrounding parts, they exhibit only some roughening or thinning from commencing absorption. Vascularity, supposed to have been seen on their surface, is really due to the development of new vessels in a pseudo-membrane that covers them. Ossification, adduced as a proof of vitality, is never found in the case of true cartilage; but the eburnation of the bony extremities, after the cartilage has disappeared, has been confounded sometimes with this.

The articular cartilages are, however, liable to various kinds of alterations, resulting from perversion of their nutrition, or from mechanical or chemical causes. Among such is a loss of elasticity, noticed by Delpech, and frequently observed by the author. *Ramollissement*, which appears to be another stage of this loss of elasticity, occurs also pretty frequently, especially in those who have died in advanced years. This change, which has by others been termed *velvety*, has been the object of much research by M. Richet since 1840, and he thinks there is always coincident with it a diminution of synovia, probably due to a lessened nutritive activity in the bones and articular secretions. A total or partial *disappearance of the cartilages* seems to be a third stage of these alterations, which, while they cannot be called normal, can yet hardly be described as pathological, as they are met with in persons whose joints were healthy.

As regards the changes in the cartilages of diseased joints, they are due either to loss of cohesion—*ramollissement*—or are characterized by thinning, inequalities, or erosions. The last especially claim attention, as by some authors they have been termed ulcerations. When the cartilage is found roughened and unequal, this is due either to wearing away or resorption exerted at certain points, to a perversion of nutrition due to disease of the bone, or to the presence of abnormal fluid within the joint. As the cartilages live at the expense of the parts which surround and support them, they become more or less changed, according to the duration and severity of the disease of the part.

When we examine a joint that has suffered from white swelling, originating in osteitis or advanced synovitis, we almost always find the appearance as if the cartilage had been irregularly punched



out. Around these spots it is quite normal, not having even lost its cohesion and elasticity, unless effusion or other alteration of the cavity of the joint be present. Generally there is more or less synovitis present; but when this is not the case, a superficial examination might lead to the affection being considered a primary lesion of the cartilage. But if the bone be so cleft that the saw falls in the centre of the erosions, osteitis will be found occupying the articular extremity of the bone, and most intense where the loss of the cartilage is seen. Brodie and other surgeons have contended that such loss of substance is due to a primary affection of the cartilage, which, extending to surrounding parts, gives rise to one of the most painful varieties of white swelling. The facts cited by Brodie are valueless, in consequence of the very superficial manner in which the examination of the joints was conducted. The history of the condition of the joints in the aged, in which, when the cartilage is gone, eburnation takes place, a change inducing little or no pain, is contradictory to the accuracy of Brodie's assignation of severe pain as a sign of cartilaginous disease. Osteitis induces the most dreadful suffering.

*Symptoms.*—While alluding to the gradual manner in which the disease may come on, M. Richet observes, that in the case of such superficial bones as the tibia and ulna, we may often detect early a little puffiness of the periosteum rounding off the edges of these bones that are naturally so sharp and distinct.

The soft parts may be at first more considerably swollen than the articular extremity, the disease then seeming to have more tendency to attack the diaphysis, or even the opposite articular end, as, e.g., the pain and swelling of the knee in coxalgia. M. Richet, several years since, proffered the explanation of this circumstance by the propagation of the inflammatory action along the medullary canal from one extremity of the bone to the other; and all subsequent observation confirms him in its correctness. Such pains are important in diagnosis, showing that we have to do with an osteitis and not a synovitis.

*Diagnosis.*—In this section M. Richet chiefly occupies himself in pointing out the distinguishing marks between osteitis and chronic synovitis. The latter may be due to a local cause, although its progress is usually dominated by a general one: but osteitis is almost always referable to a general cause. Synovitis often succeeds rheumatism. Osteitis is usually of scrofulous origin. In synovitis, the various symptoms may appear almost simultaneously; but in osteitis they are more gradual and progressive. In synovitis, there is hypertrophy of the synovial without swelling of the bone, and the softened ligaments allow of considerable and abnormal movements, while consecutive displacements occur frequently and rapidly, without deformity of the articular surfaces. In osteitis, there is appreciable enlargement of the bone, the limited motions are terribly painful, and the displacements, which take place slowly, are due to the flattening down of the deformed articulations.

*Treatment.*—Upon the general treatment of the diatheses upon which the disease depends, M. Richet has not much to say. He speaks highly of iodine and cod-liver oil in certain cases; but he does not find that the former can be used as a substitute for the latter. He considers that the tonic effects of hydropathy are sufficiently shown to induce medical men to avail themselves of its aid. Sea air and mineral waters are useful in appropriate cases. Vegetable tonics are of little use; and iron, to be even harmless, requires care in its administration.

In the local treatment of *synovitis*, although leeches sometimes give great relief, they seem at others to do harm; and when the relief obtained is not prompt, they should be discontinued, as they enfeeble. M. Richet attaches considerable importance to the prolonged use of local baths. He thinks the large flying-blisters, so much recommended by Velpeau, should not be employed until the subacute stage has been reached. The nitrate of silver ointment is very useful, and sometimes dissipates violent and obstinate pains.

In *pseudo-membranous synovitis*, issues and the actual cautery, used transcurrently, may be resorted to when the ligaments are relaxed, and the bones, consecutively inflamed, are in luxation. In the *fungoid* form they are indicated early, and must be employed boldly. In this form, too, compression, combined with immovability, is useful. When the synovial membrane is much distended, it should be opened with a trocar. M. Richet has only sometimes derived benefit from iodine injections in fistulous openings; but finds the fungosities that spring up are well treated by the tincture.

*Syphilitic Osteo-Synovitis.*—M. Richet remarks upon the silence of authors with respect to the influence of syphilis in relation to white swelling, their attention being confined to scrofula and rheumatism. M. Ricord informs him, that although he has met with certain cases of white swelling, the cause of which has been influenced by syphilis, he has never seen any that seemed to have been directly determined by it. He believes, also, that this disease influences the compact rather than the spongy tissue of bone. Notwithstanding this opinion, M. Richet believes that syphilis may alone determine a synovitis or osteitis, and so constitute an important variety of white swelling. Since his attention has been turned to the subject, he has met with several cases of *syphilitic chronic synovitis* of the knee-joint, and reports three of these in the present essay. The effusion takes place gradually, and is liable to intermissions. The skin is never red or swollen, the tumefaction entirely arising from the amount of effusion, which is sometimes great, and the thickening of the membrane. This thickening may assume the form of indurated plates, which soften and rapidly disappear under the influence of iodide of potassium. The pain is not great, and is worst while at rest. Left to itself, it tends to pass slowly into the fibrous condition, producing partial ankylosis. M. Richet feels certain that several white swellings that resist all treatment are

syphilitic, although the detection of this cause is often difficult. As the effused fluid has no tendency to become purulent, or the synovial membrane to become fungoid, the occurrence of consecutive osteitis is rare. It is rather the history of the case, than any peculiarity of local symptoms, that reveals its nature; the treatment often becoming the test of the accuracy of the diagnosis.

*Osteitis* arising from syphilis is a far more serious affection than synovitis, and in M. Richet's opinion, it is as common. He furnishes the particulars of three cases. The pain is severe, deep-seated, lancinating, and especially nocturnal. It is propagated along the shaft of the bone, which is swollen and tender. On motion, it is very severe, and sometimes terrible. The articular tumefaction is partly due to enlargement of the bone, and partly to hypertrophy of the synovial membrane. The general symptoms are little marked, but the impoverishment of the blood by the syphilitic poison, and the terrible suffering sometimes induced, may produce emaciation and the straw-coloured skin. There is less tendency to suppurate than in simple osteitis. The pus is viscous, and the sinuses assume the syphilitic aspect. The prognosis is much less serious than in simple or scrofulous osteitis, but more so than in syphilitic synovitis. The preliminary, erratic pains may be mistaken for rheumatism by the most skilful; but in the latter there are febrile symptoms, while the joint is red and swollen from effusion. As compared with simple osteitis, the syphilitic form involves the articular structures earlier, but it does not give rise to local heat and œdema. The pain seems more concentrated in the deep-seated parts, and its nocturnal exacerbation is better marked. In simple osteitis, all the bones constituting the joint may become simultaneously affected; but in the syphilitic form, one bone usually alone suffers, as the femur in the case of the knee-joint.

The essay is illustrated by thirteen fully detailed cases, besides six of syphilitic white swelling, as well as by several good lithographs; and it must be regarded as a valuable contribution to articular pathology.—[*British and Foreign Med. Chir. Review.*]

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#### *The Experience of Various Kinds of Treatment in Pneumonia.*

The author, after recapitulating the leading points of his former paper, considered,

1st, The question as to the influence of blood-letting in the treatment of pneumonia in regard to mortality. He denied that the normal mortality from that disease could be accurately given, showing, from a table he had collected, that it varied from 3 up to 31 per cent. out of some 7000 cases. He particularly alluded to age, sex, and complication as affecting mortality. At the extremes of life it was very fatal, but benignant at intermediate periods. It was more fatal among females; and complications of other diseases, chiefly phthisis and Bright's disease, greatly increased it.



Thus, a selection of favorable ages only, a diminution of the number of females, in the number of complicated cases, would generally diminish the mortality.

2d. The author then considered the treatment by blood-letting singly, instancing first two series of cases from Bouillaud, which he showed were not fairly selected according to age, sex and complication. Also, two series of cases from Grisolle, in one-third of which only had blood-letting succeeded in curing the disease; in the remaining, it had failed, necessitating the conjunction of antimonials; lastly, he alluded to cases similarly treated by Dietel, of Vienna; the mean mortality from the blood-letting treatment was 16.5 per cent. Dr. Routh then considered the treatment by blood-letting, combined with tartar emetic, instancing the cases recorded by Dr. Hughes, of Guy's Hospital, and others occurring in the practice of Drs. Walsh, Peacock, and Taylor. These cases appeared to be in no way selected; indeed, as a rule, very unfavorable, the complicated cases amounting, in those of Dr. Hughes, to 51 per cent.; in the others, 53 per cent. He also alluded to some cases similarly treated by Grisolle. The mortality obtained by these gentlemen was—

|                                           | Simple<br>Pneumonia<br>Per Cent. | All<br>Cases.<br>Per Cent. |
|-------------------------------------------|----------------------------------|----------------------------|
| Dr. Hughes . . . . .                      | 2.2                              | 24                         |
| Drs. Taylor, Peacock. and Walsh . . . . . | 3.2                              | 30                         |
| Grisolle . . . . .                        | —                                | 25.4                       |
| Mean . . . . .                            | —                                | 26                         |

3d. He then alluded to the treatment by tartar emetic singly, instancing cases from Louis, and Grisolle, and Dietel, giving a mortality, out of 170 cases, of 18 per cent. These cases were remarkable as generally recovering with very little loss of strength; and in comparing this kind of treatment with that of tartar emetic and blood-letting, conjoined by blood-letting singly, the result proved that by blood-letting and tartar emetic conjoined was the most fatal, because the most depressing.

4th. Dr. Routh then dwelt on the treatment by chloroform, selecting Varentrapp's cases as the best recorded; but even these were not fairly selected, because containing too small a number of females. The mortality he obtained was 4 per cent., or, including some other cases, which he ought not to have omitted, 11½ per cent. A large number of cases collected by Vacherer, Baumgartner, and Helbing, (193) gave a mortality only of 4¼ per cent., but he could not speak as to their assertion, not having been able to find the original documents.

5th. The author then spoke of the results obtained by dietetic treatment only. These were of two classes, those obtained by homœopaths, (i. e., in those cases where they had been also diagnosed and investigated by legitimate practitioners), and those obtained by experiments directly made by legitimate practitioners

themselves. From Jessier's cases the mortality was 14 per cent.; from Dietel's experiments, out of 189 cases so treated, the mortality was 7.4 per cent.; Dr. Todd's treatment was also much less energetic. He discouraged blood-letting and tartar emetic, trusting chiefly to the liquor ammonia acetatis, and giving the patient support.

6th. Dr. Routh then proceeded to speak of the treatment which he recommended. The indications were, first, to diminish the general fever, especially the increased cutaneous and pulmonary respiration. The former was effected by the tincture of the root of the aconitum napellus, on the action of which, in small and poisonous doses, he dwelt at length, and especially in reference to its certainty of action and utility as compared with the ordinary tincture of the Pharmacopœia; the latter indication was effected by oleaceous inunctions, which cooled the skin very rapidly.

The second class of indications was to relieve the local symptoms, which was best effected by the employment of Junot's exhausting apparatus, which did all that blood-letting could do, but saved the patient's blood, and by dry cupping or counter-irritation largely, by turpentine, according to Dr. Todd's plan, or blisters followed by repeated dressings of cotton, so as to deprive the system of a large quantity of fluid ingredient. The last class of indications to be fulfilled was that which had reference to the support of the patient. He objected altogether to the 'diète absolue' of the French, recommending the ordinary middle diet of hospitals, or beef-tea from the first, to obviate tendency to death by depression. He occasionally gave small doses of tartar emetic during the first days of the disease, to promote expectoration, and perhaps an alterative mercurial. Under this treatment, he had been generally very successful in pneumonia.

Dr. Webster remarked that more men died of pneumonia than women, the proportion being 13 of the former to 10 of the latter. It was usually fatal among children; but most fatal after the middle period of life, the greatest mortality occurring in persons between 50 and 60. He referred to the occasional termination of pneumonia in gangrene, and of its rarity in sane as compared with insane patients. Thus, in 3102 dissections of sane persons made in the Civil Hospital at Prague, 55 exhibited gangrene of lungs, or 1 in every 56 cases; whereas in 123 dissections of lunatics, lately published by him in the Psychological Journal, 17 cases exhibited gangrene of lungs, or nearly 1 in every 7 autopsies, which makes the ratio eight times greater among insane than ordinary patients. With respect to treatment, he observed that the experience of French, German, or Italian physicians, could not be compared with that of physicians in our own country, as the constitutions of the people were different, and consequently the same kind of treatment not applicable. In this country, though bleeding could not be resorted to to the same extent as formerly, it

might be still employed, according to circumstances, either locally or generally, followed by tartar emetic and the repeated application of blisters; mercury afterwards, to the extent of slight salivation, was most serviceable.—[*Dr. Routh—London Lancet.*]

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*Remarkable Case of Subclavian Aneurism; New method of Treatment; Recovery.*

Mr. Fergusson presented to his class on the 4th of August, a most interesting case—one of a series, as we subsequently learned—where a very remarkable cure has been effected in well-marked subclavian aneurism, by a new and specific method of manipulation which he has adopted. We may state here that we saw the case about a year and a half ago also, when the man was previously under treatment. Some short period before that time Mr. Fergusson conceived the plan of stopping the circulation in the aneurism by pressing the sides of the aneurismal sac together, with their intervening fibrinous deposit; and in this case, from the phenomena attending the manipulation, there appear to us very little doubt that the object held in view by Mr. Fergusson had been attained—viz: the clots of fibrin in layers in the aneurismal sac had been displaced, and, spreading from the subclavian into the auxiliary and brachial, a new sort of Brasdor's operation, at the distal side of the subclavian had been the result. In other words, we believe Mr. Fergusson here, without ligature, had attained all the advantages of the last-named operative proceeding; for not only had a blocking-up of the axillary and brachial been followed by a partial stoppage of the current through the enlarged aneurism of the subclavian, but even with very marked, but not so satisfactory, results as regarded the pulse in the radial at the wrist, which became completely stopped for a time, with symptoms of paralysis in the arm, all resulting from the displacement of the fibrinous clots.

The aneurism in the present case was situated in the subclavian, in the usual site of subclavian aneurism—namely between the scaleni muscles, and to us seemed almost to invite some modification of the Dublin surgeons' plan by compression on the first rib. The plan by compression, we need hardly observe, is in general applied to the artery above the aneurism, between the latter and the heart. Crampton, however, in 1816, showed that the obliteration of an artery can be effected without rupture or ligature of its coats, as generally conceived, simply by this blocking-up process. The early volumes of the *Lancet* contain cases also cured by Brasdor's operation; it seems, however more applicable to carotid than subclavian aneurism.

Mr. Fergusson related to his class on the 11th, at some length, the details of a previous case of subclavian aneurism, of the same character as the present, in which his ideas on this subject were



first matured. In both cases the method of cure by deligation at the tracheal side of the scaleni, as well as Brasdor's operation at the distal end of the aneurism, were inadmissible; yet it was gratifying to find the present plan, by firm pressure of the thumb on the aneurism, so as to displace some of the fibrinous clots, followed up by local pressure, succeeded in obtaining most striking and in many respects curious but satisfactory results. Intimately associated as the subclavian is at the right side with the vertebrae and carotid, the method of displacing fibrinous coagula is not without danger. A patient under such circumstances will fall down perhaps in a fit from want of circulation in one side of the "circle of Willis," formed by these arteries; yet as the cause is so apparent, the danger may not be very alarming. Some instances of cure of aneurism of even the innominate have been given by American surgeons, in which recourse was had to ligature on Brasdor's plan of the subclavian; the result here ought to be equally dangerous. Hodgson gives us cases also in which a plug of effused lymph had nearly obliterated the subclavian; while Gendrin has imitated all the phenomena of arteritis and blocking up of aneurisms by injecting irritant substances into a portion of artery contained between two ligatures. In Mr. Fergusson's new mode of operation, we believe an entirely novel idea is acted on—namely, the displacement of the lamellated fibrin of the aneurism, on which no operation has been performed, and so directing the clots of fibrin that they shall block up the distal end of the artery so diseased. As Mr. Fergusson has expressed an intention of bringing the entire subject under the notice of the Medico-Chirurgical Society, we purposely abstain from giving the cases in detail. The method of treating aneurism by compression, originating with Desault and Hunter, and recently revived with such excellent results by the Dublin surgeons, will gain an immense accession of interest, if it should prove that the fibrinous deposit of the sac of the aneurism may be thus as it were utilized in bringing about the results hitherto gained in a different mode by Brasdor's operation at the distal end of the aneurism. Considerable caution will be at first necessary, as observed by Mr. Fergusson, in selecting cases which are fitted for the present method, as premature or ill-judged experiments in the shape of direct pressure or manipulation on the sac of aneurism not requiring it, one of which we mentioned recently as brought into Guy's where direct and prolonged pressure had been made in the popliteal space before the patient came into hospital would be certain to be followed by severe inflammation of the sac and other dangerous results. The spontaneous cure of aneurism is not unknown in practice; it may take place, it must not be forgotten, by a coagulation of the contents or increase of the quantity of lamellated blood in the sac, the cavity becoming filled, and the circulation conveyed to the parts beyond the disease by the collateral vessels; or, again in some rare cases the aneuris-

mal tumor may be doubled up and press upon the portion of artery leading directly to the aneurism; or in a third fashion, as in a remarkable case given by Mr. Liston, where the patient had well-marked subclavian aneurism, which subsided and disappeared—an aneurism of the innominata pressing on and obliterating the aneurism of the subclavian!

Whatever may prove to be the correct pathological explanation of the phenomena in Mr. Fergusson's present cases, we deem it our duty to state here briefly that the cure seems complete and unequivocal without any ligature of vessels, nor is there any reason to believe the case was one of spontaneous cure of subclavian aneurism, as in the case given by Mr. Liston. It is now two years since the man came first under observation; he has been, on and off, under treatment all that time in King's College Hospital and at home in the country; but happening to be in town within the last fortnight, Mr. Fergusson took advantage of the opportunity to exhibit the case to his class.—[*Lancet*.

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*Dislocation of the Femur into the Ischiatic Notch. Reduction by Manipulation.* By FRANK H. HAMILTON, M. D., Professor of Principles and practice of Surgery in the Medical Department of the University of Buffalo.

In my report on "Dislocations" made to the New York State Medical Society in February last, and just published, I have stated that in reference to the reduction of dislocations of the hip by "manipulation" alone, I did not feel authorized to speak authoritatively, having as yet had no experience in this mode. I ventured, however, to express a hope, based upon the testimony before me, that it might hereafter prove, in a majority of cases, both safe and practicable. Since then an opportunity has been presented which has enabled me, in some measure, to determine, by personal experience, the value of this procedure, and I hasten to lay the case before the profession.

March 23, 1855. Charles McCormick, aged 21 years at work for the "State Line R. R. Co.," was caught between two freight cars, with his back resting against one and his right knee against the other; his thigh being raised to a right angle with his body. As the cars came together he felt a "cracking" at his hip joint, and was immediately unable to walk or stand.

Two hours after, I saw McCormick, and assisted by my son Theodore, and Austin Flint, Jr., I examined the limb and made arrangements for its reduction. The patient was lying upon his back and left side. His right thigh was flexed upon his body to nearly a right angle and adducted, the knee being carried across the opposite thigh. It was also rotated inward, but not forcibly.

Turning the lad upon his back and raising the left leg to a posi-

tion corresponding to the right, both legs were carefully measured with a tape line from the anterior superior spinous process to the patella, and the right leg was found to be shortened one and a half inches. Measuring again from the ant. sup. spin. p. to the most prominent point of the trochanter major the distance on the dislocated limb was six inches, and on the sound limb five inches. The head of the bone could not be felt, but no doubt remained as to its position. The limb was nearly immovable, except in one direction. It could neither be abducted, or rotated outward or carried downward.

*Procedure.* The patient lying upon his back, I seized the right leg and thigh with my hands, the leg being moderately flexed upon the thigh, and carried the knee slowly up towards the belly until it had approached within twelve or fifteen inches, when, noticing a slight resistance to farther progress in this direction, I carried the knee across the body outward until I again encountered a slight resistance, and immediately I began to allow the limb to descend. At this moment a sudden slip or snap occurred near the joint, and I supposed reduction was accomplished; but on bringing the limb down completely I found it was in the same position as before. I think the head had slipped off from the lower lip of the acetabulum, after having been gradually lifted upon it.

Without waiting, I commenced to repeat the manipulation, and in precisely the same manner. Again at the same point, when the limb was just beginning to descend, a much more distinct sensation of slipping was felt, and on dropping the limb it was found to be in place and in form, with all its mobility completely restored.

No anæsthetic was employed, and no person supported the body or interfered in any way to assist in the reduction. No outcry was made by the patient, yet he informs me that moving of the limb hurt him considerably. The amount of force employed by myself was just sufficient to lift the limb, and the time occupied in the whole procedure was only a few seconds.

After the reduction, he remained upon his back, in bed, eleven days, in pursuance of my instructions. At the end of this time he began to walk about, but was unable to resume work until after eight weeks or more. It is probable that he could have walked immediately after the reduction, without much if any inconvenience, so slight was the inflammation which resulted from the accident. He never complained of pain, but upon interrogation he replied that there was a slight soreness back of the trochanter, near the head of the bone. This soreness continued several weeks and was especially present when he bent forward. Even at the present time, four months after the accident, he occasionally feels a pain at this point when he is stooping. The motions of the joint are, however, free, and he walks nimbly and without any halt.

In short, if I may judge correctly from a single example, nothing



could be more complete than the triumph of this process over a dislocation hitherto so formidable. Nothing could be more simple and easy of execution, and nothing more gratifying both to the surgeon and to his patient. Unless, therefore, experience shall demonstrate in its practical working defects or dangers which I cannot now anticipate, I shall regard it hereafter as one of the most valuable contributions to our art, and its inventor as a true public benefactor.—[*Buffalo Med. Journal.*]

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*On the Seat and Varieties of Cataract.* By M. MALGAIGNE.

Not only is M. Malgaigne one of the ablest practical surgeons of the present time, but he has, by his patient research and great critical sagacity, been the means of overturning more than one time-honored but erroneous doctrine. He thought he had succeeded in doing this as regards cataract, in his communication to the Académie de Médecine, in 1841; but finding some persons still holding erroneous ideas upon the subject, he, in this paper, re-states the case at some length.

The history of opinion upon the seat and nature of cataract may be divided into an ancient and a modern period. During the former, extending from the school of Alexandria to the beginning of the eighteenth century, the site of cataract was placed in front of the crystalline. The modern period is divisible into certain epochs—viz., 1. That of 1705, in which Brisseau demonstrated that the crystalline itself was the seat of cataract. 2. Between 1755 and 1763, Tenon and Hoin announced the existence of capsular cataract and cataract of the liquor Morgagni. 3. From 1790 to 1817, the German school multiplied the varieties of cataract beyond all measure. 4. M. Malgaigne published in 1841 the result of his necroscopical researches upon the subject. Prior to 1840, he believed in the existence of lenticular and capsular cataract, as other people did, when accident led him to investigate the matter in a succession of persons dying with cataract, at the Bicêtre, and to his astonishment he never could discover any traces of a capsular cataract. In 1841, he communicated accounts of twenty-five autopsies, and since then, these have reached to more than sixty. In none of these did he ever find the *capsule* opaque, or the opacity of the lens beginning at its centre—the cataract invariably commencing in the soft layers of the lens lying nearest the capsule, the opacity, in the great majority of cases, being complete at its anterior and posterior surfaces, while the nucleus continued transparent. In some rare cases the nucleus was also opaque. In other rarer cases, the capsule was found thickened from the deposition of coagulable lymph attaching it to the iris; but in no instance could he find an example of a simple *capsular cataract*. After a full consideration of the subject, and an examination of

the criticisms that have been advanced, he comes to the final conclusions—1. That the existence of a cataract commencing in the centre of the lens is as yet purely hypothetical. 2. There is no example of a simple capsular cataract without opacity of the lens. 3. Complicated capsular cataract may form an exception to this rule; only two instances of this, however, having been demonstrated. As to the cataract of the liquor Morgagni, the author's researches lead him to deny the existence of any such fluid. As a final *résumé*, it may therefore be stated that, to the present time, two varieties of cataract only are known, lenticular and capsulo-lenticular—the change in the crystalline always commencing in the layers adjoining the capsule, although this itself remains transparent.

In a note, M. Malgaigne makes an observation respecting the mode of judging of the transparency of the sound crystalline, when removed. The light can be very well seen through it, but objects cannot be distinguished. The surface has lost the polish bestowed on it by its capsule, and it resembles a piece of broken crystal, which, although transparent, refracts the rays too much to allow of distinct vision. If however we attach the object to the lens, we then discern it wonderfully—the smallest fibres, for example, of the tissue of a dissecting-room apron, upon which the lens has been laid, being distinctly visible. Applying this test to opacities, whether central or peripheric, slight or thick, yellow or brown, it becomes impossible to see the texture of the apron.

[*Rev. Med. Chir. Brit. and For. Rev.*

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*Professor W. Stone's Treatment of Yellow Fever.*

We extract from the New York Medical Times the following remarks of Prof. Stone, whose acknowledged ability and success in the treatment of Yellow fever entitle his testimony to great weight. The learned gentleman's views were delivered at a recent meeting of the New York Academy of Medicine.

*Treatment.*—Yellow fever is a self-limited disease; it is not to be treated—it is to be managed. All that is to be done is to keep the patient alive for a certain time, and he will get well.

The disease is ushered in with a chill or slight rigor, often scarcely noticeable, followed by heat in the forehead, pain in head, limbs, and back. This is again followed by a hot fever, and if the patient be kept under cover, and carefully treated, these symptoms will quietly terminate in two or three days; but if left to themselves to toss about and not remain under cover, the sweating stage passes on for five or six days, and collapse, black vomit, and death result.

The only treatment found by Dr. S. to be useful, is to favor the efforts of nature in prolonged sweating, calm, and rest of the sys-

tem, and the fever will generally be got rid of in the first two or three days. It terminates in favorable cases on or before the third day, leaving the skin natural. Those who treat it otherwise than expectantly do not understand the nature of the disease.

Among those who may be said to understand the disease, there are two methods of treatment: the expectant—cups to temples to relieve cephalalgia, slight laxatives to open the bowels, hot baths under the bedclothes. Others give quinine. Dr. S. was the first to do so, whoever has the credit, but no matter about that. The only difference is that they do not give it with any specific object. His method was a full dose at the beginning of the disease, but not afterward. Thus given, it promoted and prolonged the sweating stage, and while this was kept up, the patient was safe. It was remarked, that they would get well without quinine where it was generally prescribed. He was physician for many years to a hospital where there were 40 to 50 cases a day, and he noted that those in favor of this quinine treatment were about 10 per cent.

Dr. S. remarked, that in 1847 he treated forty cases in succession by quinine, among mechanics, who had no nursing except what was provided by friends, and did not lose a single patient. It was in a favorable epidemic, but considering their destitution of proper nursing, deaths would have been as likely to occur as in a worse epidemic.

As to the use of *calomel* in this disease, there is no possible condition of the system where there could be any benefit derived from its use—there was no local disease. The liver has nothing to do with it. He knew this, for he had followed the patients of the Calomelites to the dead house in plenty. While serving as surgeon of the Charity Hospital, the medical side of the hospital was full, and there were several mechanics who applied for admittance, and wished to be treated by Dr. S. and as he had some empty beds, he received them. But one was sent to the medical wards, and he gave him foot-baths, kept him warm, regulated his drinks, &c., and gave quinine. The attending physician came in the morning; he ordered a drachm of calomel, but Dr. S. put up magnesia. The next day he was better, and the doctor repeated the dose, but he took the liberty to repeat the magnesia. He got well, and thenceforward was one of the attending physician's "brag cases," for he dared not tell him of his doings. Then came new physicians from Paris, full of Broussais' theory, and they bled and boasted of their successes also for a while, and in truth they did succeed as well as the former. Then came eclectics with fanciful theories; they gave a little calomel to disgorge the liver a little, cups a little, leeches a little, and with a result very little different from the others. In fact some will get well in spite of the treatment, and then again some forms of the fever are fatal in the beginning. When, however, they are brought side by side, and we can observe them *en masse*, we can more properly judge of the relative value of the dif-



ferent modes of treatment, than in the isolated cases met with in ordinary practice. The difference is very manifest—all perturbing treatment is alike bad.

There are some peculiarities in the disease that might not at first strike one—the disturbed nervous system, and especially delirium—one of the worst symptoms. This may appear at first, but not usually. Its first evidence is restlessness and want of sleep; objects are seen very much as in *mania-a-potu*. Narcotics produce stupor and death, for the patients with this disease are peculiarly susceptible to morphine: stimulants are much better. You must watch to give the stimulants as early as possible; they then sweat off, and are relieved in 24 to 36 hours; but even then they must not be disturbed—if raised up, they faint away. Perfect and absolute rest, body and mind, are indispensable. If they are excited, the heat returns, and they die. Watch for sleeplessness, and give minute anodynes and stimulants, such as they are able to bear. Of those cases that run on and approach the period of black vomit, if managed properly as to drinks, by avoiding bitter infusions, &c., very many recover; and those that do not vomit would have the black vomit if they vomit at all. Some have a preference for certain kinds of drink, as porter; others prefer brandy, &c. Give those agreeable to the palate. As they approach the black-vomit period with previous restlessness and acid secretions, give some alkali, with minute doses (say a 20th or a 30th of a grain) of morphine, with champagne, ale, beef-essence, &c. Impart to the patient a feeling of safety and security. And yet I have thought, in proportion to the mildness of the disease was the danger; for quiet is absolutely necessary, and coercion does not answer. The patient is to be managed, not treated.

Foot-baths under the clothes, will often produce favorable sweats. When in a state of dry heat, forced perspiration is bad; sponging with tepid water is then better. The douche is but of temporary benefit, and the subsequent reaction leaves the patient worse. Sponging with lemon-juice, sweet oil, and salt is used by the Creoles and Spaniards, but pure water is better. All that is to be done is to ease them through.

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Dr. Gardner stated that Dr. Ashbel Smith laid great stress on covering, and said the patient should be enveloped in blankets and carefully excluded from the air. Was this correct, and what drinks are proper?

Dr. Stone.—Careful covering of the entire body and limbs is absolutely requisite, but not to swelter under too much covering. If the hands were but exposed, sometimes the heat would return and a relapse ensue. Some mild diaphoretics may be given; such drinks as the patients desire; one year all want brandy and water, other years malt liquors. Give that which is desired, and carefully avoid even the nervous shock caused by a bitter or disagreeable

medicine. Sponging the body under the clothes, ice water to head, generally were followed by reaction and more pain. Dr. Cartwright had pursued the opposite plan of enveloping the head in warm fomentations.

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Dr. Corson wished to know the doses of quinine which Dr. S. gave, and the vehicle.

Dr. Stone replied that he usually gave a single dose of fifteen or twenty grains, according to circumstances, at the onset, perhaps ten grains more 12 hours after, but none unless on the first day; and the second day it is entirely useless, and after that actually injurious, although they bear it better than any other remedy. It causes vomiting when given late, and is not necessary, for its effects last several hours after its administration.

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*Treatment of Sciatica.* By PEYTON BLAKISTON, F. R. S.

Dr. Blakiston has pursued the following treatment for twenty years with considerable success. He first saw it adopted in Paris in 1833: A blister, about the size of a crown-piece, is placed over the chief seat of pain, which is usually the flattened part of the buttock. After it has risen well, and the cuticle has been thoroughly removed, the raw surface is sprinkled with a powder, consisting of one grain of acetate of morphia on an average, and a little white sugar. This dressing is repeated for six successive days, the surface of the blister being kept in a raw state, if requisite, by cantharides or savine cerate, or else by Albuspeyeres' plaster. This suffices for a very mild case; but in severe cases of old standing, the pain will now be found to have left its original seat, and to have seized on the knee of the affected side. The same treatment is then applied to the ham; and after six dressings, the pain will have generally disappeared, and the patient will rapidly recover. By this mode of treatment, eighty-three cases of uncomplicated sciatica have been cured, without a failure having come to the knowledge of the writer. This number might have been greatly augmented had it included the results arrived at by such of his friends and former pupils as had employed it at his suggestion, and which have been no less successful than those which occurred in his practice; but he is desirous of recording such only as have come under his own immediate notice, and for the accuracy of which he consequently can hold himself responsible. In the great majority of these cases no other drug was administered; but in a few some laxative medicine or injection was given to remove constipation. In two or three cases, there was a tendency to double sciatica, and then the pain passed from the sciatic region first treated to that of the opposite side, and from thence down to the knee of this last side, but never attacked the knee of the side first

affected. It is right to mention, that in hospital practice three cases were placed under the writer's care, which he considered more than doubtful, and they were therefore treated under protest, so to speak. They all turned out cases of hip disease, and therefore they are not included in those above enumerated. The difference in the sensations felt by the patients on the first application of the morphia was remarkable; and without any attempt to generalise, it may be stated that a close connexion was observed between the sensations felt and the previous state of health. Thus the effect produced on three persons in robust health—a blacksmith, a gamekeeper, and a lady—was most intense; an extraordinary thrilling was felt over the whole body, particularly at the extremities, with great nausea, and a tendency to faint. The lady vomited incessantly for twelve hours, so that it was found advisable to reduce the quantity of morphia in the powders to half a grain. On the the other hand, a gentleman, who had been much reduced by overwork and by long suffering, felt no effect whatever from the application of the powders, and yet he recovered in an equally short time with the others. A lady, also, who had been taking considerable doses of opium, hardly felt the application of morphia until it was increased to two grains; but this case has been excluded, because, although the sciatica was removed by the treatment, there remained an incurable disease, which eventually destroyed her. One lady, aged 26, in whom the disease was not of long standing, obstinately refused to have a second powder applied; but happily the one application sufficed to effect a cure. In six cases the disease recurred after an interval of from five to eighteen months; and in two of these it recurred twice; but each attack was less severe than the one which preceded it, and yielded readily to the same treatment. It is possible however, that relapses might have more frequently taken place without having come under the notice of the writer; but he thinks this cannot have happened very often. Some other forms of neuralgia were also benefited by this mode of treatment. Thus a very distressing case of neuralgia of the scalp yielded at once; and shooting pains, which frequently accompany cancer of the stomach, were sometimes much relieved by it.—[*Med. Times and Gazette.*

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*On the Use of Chlorate of Potash in Mercurial Stomatitis.*

From the experiments of M. Herpin, of Geneva, from those of M. Blache (*Gaz. Hebdomadaire*, vol. ii., No. 8, p. 147), as well as from some well-detailed facts that M. Demarquay has just reported, it would appear that chlorate of potash, given internally, arrests, with rapidity and certainty, the effects of mercurial stomatitis. This effect has been established in patients in whom the mercurial intoxication supervened on the exhibition of mercury for syphilis, puerperal peritonitis, and ophthalmia.



The chlorate is administered in a mucilaginous mixture, the dose commencing with half a drachm, which is frequently sufficient to remove the symptoms. But it has been given to the extent of four scruples, two and a half drachms, half an ounce, and upwards.

As this medicine, notwithstanding its remarkable efficacy, is by no means a specific, we must not neglect to combine with it local astringents and caustics, which, even alone, possess so powerful an action in mercurial ptyalism.

M. Gustin, intern in pharmacy, wishing, for the sake of experiment, to submit himself to the action of chlorate of potash, took two drachms at nine o'clock in the evening. On awaking, a sort of stricture, with slight nausea, was perceived in the mouth; the gums were a little rough to the touch. Although the saliva was not sensibly lessened, it appeared to him to be more watery than usual. This observer has also proved that the chlorate of potash is, in great part, eliminated by the urinary secretion.—[*Bulletin Général de Thérapeutique*, and *Gazette Hebdomadaire*, N. Y. Jour. of Medicine,

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*Treatment of Fistula In Ano*, By T. R. MITCHELL, M.D., F.R.C.S.I.

I am anxious to direct the notice of the profession to a modification of treatment in the cure of fistula in ano. It is, I believe, an established axiom that in all cases it is necessary to divide the sphincter ani muscle, the usual operation consisting of the introduction of a probe-pointed bistoury as far as the sinus extends. Others recommended the mere division of the sphincter in a lower situation. Whichever operation is performed, the result is very often a relaxed state of the sphincter for some time afterwards.

In a case on which I operated twelve months ago, the gentleman had considerable difficulty in retaining the bowel up, particularly after violent exercise or defecation. In this case I found that the fibres of the sphincter ani were much relaxed, so much so as to allow the rectum to protrude for several inches, so as very closely to resemble a prolapsed uterus. The constitution began to suffer from the constant discharges of muco-purulent matter, and he was quite incapacitated from following his employment. Having previously emptied the rectum by an aperient, I directed him to force down as much as possible, and then proceeded to touch the tumor with strong nitric acid; this was done with a piece of thin wood, four stripes extending from the upper part of the tumor to the sphincter being made on the surface; the part was then smeared well over with oil, and returned. The operation required to be repeated at the end of ten days, when only about two inches of the rectum could be forced down, and he has since then been able to go about his employment without the slightest inconvenience.

The profession are indebted to the late Dr. Houston, of Dublin, for the introduction of nitric acid in the treatment of vascular tumors of the rectum, many cases of its successful employment being given by him in the twenty-third volume of the *Dublin Journal of Medical Science*.

Since the above case was treated, I have had several of a similar nature, and the result has been the same. It would, therefore, be unpardonable in me to enlarge further on the subject, particularly as a similar treatment has been adopted very extensively by other surgeons, and is well known to the profession. It, however, struck me that if, instead of the great relaxation of the sphincter which so frequently follows its division, we could cause a constriction as great or nearly so as before the operation, we should be doing good service. Now this I think may be accomplished by a very simple method—employing the nitric acid before the relaxation takes place, or prior to any protrusion; and the plan I adopt, and which I have hitherto found very successful, is to apply the strong nitric acid around the margins of the sphincter ani which have been divided, and this I do on the fourth day after the operation; the pain of its application is quickly removed by smearing the parts over with oil, and it is only necessary to apply it twice.

Before concluding these remarks, I wish to state that I have found patients laboring under diseases of the rectum particularly difficult to get under the influence of chloroform, and have found the process much facilitated by employing it locally as well as by inspiration, as I have found the parts excessively sensitive even when the patient has apparently been fully under its influence, and when pricking or pinching was unheeded. This, I think, may be easily explained by the fact of the patient's sufferings having been for some time directed to the part, and to the nerves being in a highly sensitive condition.—[*Lancet*.

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*On the Use of Sulphate of Bebeerine in Menorrhagia.* By Prof. A. P. MERRILL, M. D.

A few weeks ago I was summoned, in haste, to a lady suffering from an attack of menorrhagia. She had been long subject to excessive menstrual discharges, and uterine hæmorrhages, and had been treated for them by several physicians without success. I administered five grains of the sulphate of bebeerine, which I happened to have in my pocket, and ordered twenty pills of four grains each, one of which she was directed to take every two hours, until relief should be obtained. On visiting her the succeeding day, she showed me the twenty pills, and said the dose I had given her suspended the discharge before they were brought from the druggist, and she deemed it unnecessary to take them. One other case, occurring about the same time, in all respects very

similar to the above, was relieved, also, by a single dose of five grains.

I could relate more than a dozen cases besides the foregoing, more or less severe, in which the sulphate of bebeerine has been successful. Several women in this city are now in the habit of keeping the remedy always at hand, with perfect confidence, from the results of their own experience, of being able to restrain excessive menstruation, and uterine hæmorrhage, whenever they may occur. In several cases, also, I have known it relieve leucorrhæal discharges, and to give tone and vigor to the vagina, suffering relaxation from the effect of such discharges; and it is the only internal remedy upon which I have been able to rely, for the relief of *pruritus vulvæ et vaginæ*. Whether this remedy will prove to be as valuable as the above experiments would seem to indicate, remains to be proved; and it is with a view to elicit such proof, that this publication is made.—[*Memphis Med. Recorder*.

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## EDITORIAL AND MISCELLANEOUS.

*Local Anæsthesia by cold.*—The efficacy of the frigorific mixture of ice and salt as a local anæsthetic, in surgical operations which do not involve the deep seated tissues, and the slowness of its adoption as a general rule of practice in such cases, will plead my apology for again directing attention to it. An instance of its successful application as late as yesterday, also prompts me to say another word upon the subject, in the hope that the same relief may be vouchsafed to other patients. *Bob*, a negro boy about 15 years of age, was sent to me from Barnwell District, S. C., with a tumor about the size of a woman's fist, situated on the leg, about the upper end of the fibula. This proved to be a lipoma of five or six years' standing. The patient was brought before the Class of the Medical College and placed upon a table, when the freezing mixture was applied for four minutes. The surface being blanched by the cold, an incision six inches long was made and the tumor extirpated *without the knowledge of the patient*, who was lying in such a position that he could not see what was being done. The insensibility was so complete that when the operation was over, on being asked if it gave him any pain, he said that he had felt none whatever, and that he did not know we had commenced cutting; he could not be made to believe the tumor was removed, until it was shown to him. There was no bleeding until reaction took place, when a slight oozing ensued, which ceased upon bringing the edges of the wound together with adhesive strips.

Although I have been now resorting to this mode of inducing local anæsthesia for about a year, in all cases to which it was applicable, this is the first



instance in which *total unconsciousness* of the operation has been manifest. In most cases the patients feel the knife only as it reaches the deep tissues in passing behind the tumor, and then only slightly, inasmuch as the sensibility of the cellular structure is not great.

When it is remembered that the greater number of surgical operations involve superficial parts alone, and that we may by the use of so simple and harmless an application as the freezing mixture, render them comparatively painless, it must be conceded that the discovery is one of great importance and that it should in all suitable cases take the place of the more hazardous expedient of chloroformization. Yet, if we are to judge from the paucity of recorded testimony, surgeons have been unaccountably dilatory in its adoption, in comparison with the alacrity exhibited in trying other anæsthetics. The freezing mixture may be substituted for other anæsthetics in the amputation of the fingers, toes, and wrist, as well as the opening of furuncles, abscesses, and whitlows, the extirpation of superficial tumors, &c., thus reducing to a very small figure the number of operations in which chloroform or the ethers would be necessary or proper.

Augusta, 20th Dec., 1855.

L. A. DUGAS.

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### BIBLIOGRAPHICAL.

*Clinical Lectures on the Diseases of Women and Children.* By G. S. BEDFORD, A. M., M. D., Prof. of Obstetrics, &c., in the University of New York. 2d Edition. New York: S. S. & W. Wood. 1855. 8vo. pp. 568. (For sale by T. Richards & Son.)

Whilst systematic treatises are necessary in the study of Medicine, much good may be accomplished by the publication of clinical lectures or remarks suggested by the presence of individual cases of sickness, and designed for the ear of Students. It is true that the printed lecture loses a part of its value to the reader, in not being accompanied by the presence of the patient; still, there are countless modifications and peculiarities met at the bed-side, which can find no place in a systematic treatise, and which may yet be made the subject of interesting observations to a class of novices, either orally or otherwise. In short, the relation of cases, with running comments upon them, constitutes one of the very best modes of conveying valuable information to the student of medicine.

The work before us is one of this kind, written in an easy, lucid, and happy style, eminently practical, and therefore valuable as a contribution to medical knowledge. Prof. B's extensive opportunities have enabled him thus to bring together a large number of the most interesting specimens of female and infantile affections, and to indicate his views of their treatment. In the accomplishment of the task, the author has evinced a degree of discernment which will doubtless add materially to his already extended reputation.

*A Treatise on Venereal Diseases* By A. VIDAL, (decassis) Surgeon to the Venereal Hospital of Paris, &c., &c. With colored plates. Translated, with annotations, by GEO. C. BLACKMAN, M.D., &c. 2d Ed. New York: S. S. & W. Wood. 1855. 8vo. pp. 500. (For sale by T. Richards & Son.)

Having already had occasion to notice this work, upon the appearance of its first edition, we can only reiterate our commendation of it, as one of the most complete and useful treatises on syphilitic diseases we know.

*History of Medicine, from its origin to the 19th Century, with an appendix containing a Philosophical and Historical Review of Medicine to the present time.* By P. V. RENOARD, M.D.. Translated from the French, by CORNELIUS G. COMEGYS, M.D., Prof. of the Institutes of Medicine in Miami Medical College. Cincinnati: Moore, Wiltach, Keys & Co. 1856. 8vo., pp. 719.

We are indebted to the publishers for this valuable work, the mechanical execution of which, reflects great credit upon the taste and ability of Western printers.

It has long been a source of surprise to us that we had no History of Medicine in the English language, while the French and Germans are so well provided with them. We are happy to find the deficiency supplied by the industry of Prof. C. The translator has judiciously selected for presentation to the American reader, the standard work of Renouard, in one volume, instead of the more extended and elaborate History of Sprengel, which would have been too voluminous for the mass of our practitioners, who will doubtless feel grateful to Prof. C. for the opportunity thus afforded of becoming acquainted with the history of their profession.

M. Renouard divides the history of medicine into, 1st, the Age of *Foundation*, which comprehends the "*Primitive Period*, or that of instinct," the "*Sacred or Mystic Period*," the "*Philosophic Period*," and the "*Anatomic Period*," and extends from the earliest ages to the death of Galen, A. D., 200. 2d, the Age of *Transition*, which includes the *Greek* and *Arabic* periods, ending A. D. 1400; and 3d, the Age of *Renovation*, embracing the "*Erudite*" and the "*Reform*" periods, from the 15th to the 19th centuries.

We cheerfully commend this book to the patronage of the profession.

*The Anatomical Remembrancer, or Complete Pocket Anatomist:* Containing a concise description of the structure of the human body. 2d American, from the 4th London Edition. With corrections and additions by C. E. ISAACS, M. D., &c. New York: S. S. & W. Wood. 1855. 18mo., pp. 270. (For sale by T. Richards & Son.)

A very complete and convenient little book for the use of Students in the dissecting room.

*How to Nurse Sick Children.* Intended especially as a help to the Nurses at the Hospital for Sick Children; but containing directions which may

be found of service to all who have the charge of the young. New York : S. S. & W. Wood. 1855. 18mo., pp. 70. (For sale by T. Richards & Son.)

This little work contains much useful information, and should be in the hands of all young mothers. It would do no harm even to those who think themselves *experienced* matrons.

*Prof. JOSEPH A. EVE'S Address to the Class of the Medical College of Georgia, at the opening of the Session of 1855-6.*

This very creditable production has been published by the Class to whom it was addressed. We regret that it is out of our power to do it justice by any notice we may pen within the limits assigned us. We cannot refrain, however, from reproducing the following tribute to departed worth :

"During the prevalence of the epidemic that scourged our city, last year—to the honor of our physicians be it spoken—no one was known to decline a call to a poor patient ; but on the contrary, such were sought out and attended with the greatest zeal, with no expectation of reward beyond the approbation of heaven and their own conscience. It is not my design to eulogise my professional brethren ; they need no eulogy from me ; they enjoy that far richer reward—the consciousness of having acted well their part ; but I cannot forbear a passing tribute of respect to departed worth : to the memory of the amiable and lamented MACKIE, our accomplished and talented alumnus.

"The humane physician, the truly "good Samaritan," in both capacities he sought out the destitute and ministered to their wants, whether his own or others' patients, a minister of mercy to the poor ! Long will his name be embalmed in grateful remembrance. Long shall the widow's and the orphan's tear bedew his tomb. With a fixed presentiment that he would fall a victim to the pestilence, he quailed not, nor faltered in the discharge of his duties, preferring like a good soldier to fall at his post with his armor on. With more cool, unflinching courage, more true heroism than inspires the warrior in the wild excitement of battle, he braved danger in its most appalling form, and nobly fell a martyr to the cause of humanity, a sacrifice on the altar of benevolence. Emulate his example, and let his name, as it is on ours, be engraven on the heart of every student and graduate of this college."

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*Ecraseur (crusher) of M. Chassaignac.*

To the Editor of the New York Medical Times ;

SIR—The new instrument for linear section, the Ecraseur of M. Chassaignac, is now daily employed for removing tumors, and in operations for fistula, varicocele, &c., and is destined soon to be universally known to surgeons by its legitimate use, if not, also, by its abuse.

The écraseur is so adjusted as to embrace the part to be cut by a loop of chain, presenting a plane surface with which the section is made. The two extremities of the chain, entering the tube of the instrument, placed in contact with the point where the division is to finish, are successively and at determined intervals drawn by a balance lever worked at the opposite extremity of the tube. Every successive diminution of the loop is retain-



ed, and thus the operation may be completed within any specified time deemed expedient, having reference to the state of the patient, and the vascularity or hæmorrhagic tendency of the parts.

The end proposed to be attained by the *écraseur* is, section without the inconvenience of ligature or the hazards of hæmorrhage; forming a new epoch in operative surgery.

A work containing plates and a full description of the several forms manufactured by M. Mathieu, of Paris, adapted to operations of the exterior of the body, and in sundry cavities, is soon to be published; therefore it will be preferable on this occasion simply to state a few cases of its application. Let us commence with *hæmorrhoidal tumors*. In the case of tumors exterior to the orifice of the rectum, each separately, or several united, are, in the first instance, surrounded at the base, as in ordinary cases, by ligature. Over the thread, and in the groove thus formed, and separating the tumor from the healthy part, is placed the loop of the chain which is to penetrate by alternate progressions of each half of the loop, operated by the balance lever at such intervals of fifteen, thirty, or sixty seconds. Internal hæmorrhoids are seized by an "*érique*," or are brought to view by other usual modes, and are embraced and removed in the same manner as those already described.

Several of the cases operated on by M. Chassaignac have been of the most vascular kind, and yet their removal has not been attended, or followed by any loss of blood, or any of the grave accidents, which sometimes occur in the treatment by cauterization, ligature, or excision by the usual mode. Polypi of the rectum have been successfully removed in a similar manner.

One of the most remarkable applications of the *écraseur* is in the operation for fistula in ano, which alone entitles it to full rank among the "*armamenta chirurgiæ*," combining, as it does, all the advantages of the apolynose of the ancients, and the section of modern practice.

About three weeks since, M. Chassaignac removed a testis degenerated into an encephaloid tumor some five inches long, three broad, and two thick, occupying the right portion of the scrotum. A ligature was at first applied in such a manner as to define, as nearly as possible, the limits between the healthy tissue and the tumor. The pedicle thus formed was severed by the *écraseur* without the loss of any blood. A considerable portion of healthy integument was necessarily involved in the operation. This was to be regretted, and an observer might have hesitated to approve of the employment of the *écraseur* in this case. A wound was thus left six inches in length, the edges of which were coaptated and retained by suture; but three or four days after, adhesion by first intention having failed, as might have been expected, the sutures were removed and simple dressings applied, and the wound is now rapidly healing by a process of healthy granulations.

This instrument has been successfully used in excising the neck of the uterus and in the removal of erectile tumors. It is not my object to enter into a minute description of these cases; nor shall I attempt to criticise what to many would seem an abuse of the *écraseur* in a case of phymosis, and another of varicocele now under treatment at the Hospital Lariboisière.

I should not omit to mention a case of great interest at to-day's clinique, October 1st. A man aged about sixty, of strong constitution and vigorous frame, had a canceroid affection on the right lateral portion of the

tongue. The tumor was about two inches long, one broad, and three fourths thick, projecting forward to near the tip of the tongue, from which it was separated by a narrow fissure, giving the appearance of a double tongue. Most of the patients mentioned have been under the influence of ether or chloroform; but this man, of strong nerve, used no anæsthetic. The operator, seizing with his left hand the entire mass, circumscribed the tumor by a strong ligature, and placed in the groove thus formed the loop of the *écraseur*, and commenced the alternate motions of the lever. As the hazards from hæmorrhage in operations on the tongue demand special care, M. Chassaignac directed an assistant to give the progressive movements at intervals of one minute each, thus prolonging the operation more than an hour.

The patient seated in his chair, himself supporting the instrument, presented the appearance of an *oriental* with his pipe. Occasionally he arose and walked to the window, if not to view the beautiful court, parterre, and pavilions of this model hospital of Paris, at least to breathe the refreshing air as it circulated around the heights of Montmartre.

While the excision of the tumor was thus slowly progressing, M. Chassaignac was at liberty to proceed to the operation for fistula in ano, removal of a polypus from the rectum, and the elimination of hæmorrhoidal tumors from three other patients. Verily, thought I, this is a new era in operative surgery.

Permit me to add, that my observations are yet too limited and crude to judge of the actual merits of this new practice; but, granting all apparent claims in favor of the *écraseur*, there yet remain some positive fears in regard to its popularization. The facility of operations by this instrument may tend to its unwarrantable application in cases imperfectly diagnosed by incompetent operators.

Yours truly,

Paris, Oct 1, 1855.

DAVID P. HOLTON, M.D.

*Lizard in the Stomach.*—Dr. Clark, of Montpelier, has exhibited to the Society (Vermont Medical Society) a red lizard, about three inches in length, living and well, which was vomited by a patient of his on the 1st of September. He gave the following history:

A healthy farmer, æt. 50, under his care for two years, for occasional severe nervous symptoms. During the first year, occasional sudden attacks of insensibility, falling and remaining for several hours unconscious, and then recovering completely. These attacks occurred at irregular intervals, and under all circumstances—separated by several weeks, more or less, of perfect health. In the second year, these attacks gave place to paroxysms of epileptic convulsions, sometimes repeated many times in a day, with intervals of perfect health, as before. For several hours, however, after an attack, usually headache or uneasy sensations in the stomach, lasting several hours, which symptoms occurred at no other time. Was repeatedly purged with cathartics—never vomited—till, on the 1st September, 1855, after dining on fresh pork, was much distressed at stomach, and vomited, with much strangling, a quantity of pork and the lizard which Dr. Clark exhibited. Patient was in his chamber at the time, and immediately sent for Dr. C., who found him as described. Vomited a little blood after the lizard.

The patient has since been in perfect health—has had neither epileptic paroxysms nor any unusual sensations in the stomach or head. As soon

as he saw the lizard, the patient said he remembered that a little before he began to suffer in health (twenty-eight months ago), he had the sensation of swallowing some small substance one day when he was drinking at a spring, but had forgotten it.

This case is worthy of record, from its authenticity. It has been denied that animals which have a known existence out of the body, can live within it. We have here indisputable evidence that a lizard lived in a man's stomach for a considerable time; and should the patient continue three or four months without a recurrence of the symptoms, we shall have no reason to doubt that the nervous affection was produced by the presence of the animal in his stomach. He had passed a much longer period than usual without an attack, at the time the case was reported.—[*Boston Med. and Surg. Journal*.]

*New Remedy for Hemorrhoids.* By C. E. BUCKINGHAM.—The Journal of Nov. 15th contains a translation, from the *Gazette des Hopitaux*, of a conversation concerning the extract or powder of capsicum as a remedy for hemorrhoids. There is another preparation of the same plant, more agreeable to take, which will probably be found quite as efficacious. I mean the pickled unripe pepper, which I have been in the habit for years of prescribing, as an article of diet for patients with this disagreeable disease. The results of the treatment are quite as successful as from any remedy in any other disease. Many patients are unwilling to try the pickled pepper, unless permission is also given them to render their clothing filthy with some greasy substance. Such patients may be indulged with safety, but the pepper alone, in the large majority of cases, the bowels having first been emptied, will be found treatment enough. Ward's paste, the confect. piper. nig., has for an indefinite time been used for this purpose, but it has not one half the virtue. Dose—one pepper for dinner.—[*Ibid*.]

*Aneurism of the Superior Palatine Artery.* By M. TETRLINCK.—This surgical curiosity was met with in the case of a man, æt. 74. The tumour occupied the roof of the palate, which bled so frequently that the patient was much exhausted. The tumor was soft, elastic, and pulsated synchronously with the heart, alternately expanding and diminishing. Its cause was unknown, and it had lasted for three weeks. The actual cautery was employed, the slough separated in eight days, the hemorrhage did not recur, and a perfect cure resulted.—[*Dublin Hosp. Gaz.*, from *Gaz. Méd.*]

*Eczema.*—The external use of cod-liver oil in chronic eczema and other troublesome affections of the skin, has been found very efficacious in various trials lately made by Mr. Paget of St. Bartholomew's, who derived the idea from Professor Malmsten of Stockholm. In the *Allgemein Med. Zeitung*, a Berlin journal, we find Professor Malmsten detailing his experience on the use of the fish oils in chronic diseases of the skin, including especially chronic eczema, impetigo, psoriasis, and that most distressing and intractable eruption, prurigo fornicans. The affected parts should be constantly soaked with the oil for about two weeks, when the disease has generally yielded. The itching always gives way at once, and the remedy, however disagreeable, is more bearable than the disease. The use of an alkaline bath once a week is permitted, and the oil at once reapplied.

[*Virginia Med. and Surg. Journal*.]



*Prof. AGASSIZ.*—As most well informed physicians are fond of Natural History, we cheerfully give a place in our Journal, to the following

• PROSPECTUS.

*Contributions to the Natural History of the United States.* In Ten Vols. Quarto. By LOUIS AGASSIZ. To be published by Messrs. Little, Brown & Co., of Boston, Mass.

For more than eight years, I have now been in this country, devoting my attention chiefly to the study of those classes of the Animal Kingdom which American naturalists have, thus far, not fully investigated. The amount of materials I have already brought together is so great, that the time seems to me to have come when I should proceed with the publication of the more important results of these investigations. Desirous of contributing my share to the rapid progress natural sciences are making at present in this part of the world, I wish to present my work to my fellow-laborers in this field in the form most easily accessible to them. It has, therefore, appeared to me desirable to bring it out in a series of independent volumes. This plan will, moreover, leave me entirely free to present my contributions to science with such minute details, and to such an extent as I shall deem necessary to the fullest illustration of my subject.

Without entering into a detailed account of the contents of this work, it may be sufficient here to state, that it will contain the results of my embryological investigations, embracing about sixty monographs, from all the classes of animals, especially selected among those best known as characteristic of this continent; also descriptions of a great number of new genera and species, accompanied with accurate figures, and such anatomical details as may contribute to illustrate their natural affinities and their internal structure.

I shall not extend my publications to classes already illustrated by others, but limit myself to offering such additions to the Natural History of the States I have visited as may constitute real contributions to the advance of our knowledge.

From a careful estimate of the materials I have now on hand, I am satisfied I shall be able to include the most valuable part of my investigations in ten quarto volumes; each volume containing about three hundred pages, with at least twenty plates. I therefore now open a subscription for such a work, in ten volumes, quarto, in cloth binding, at the price of twelve dollars each volume, payable on delivery. Each volume shall be complete in itself, containing one or several independent monographs; so that, if any unforeseen difficulties should interrupt the publication of the whole, the parts already published shall not remain imperfect. As far as possible, I shall always select first such of my papers as contain the largest amount of new matter, or may contribute most directly to the advancement of science. Having devoted the greatest part of my time to the investigation of the embryonic growth of our animals, I shall make a beginning with the embryology of our turtles, several of which I have traced through all their changes. I trust this monograph will afford our medical students a fair opportunity of making themselves familiar with the modern results of one branch of physiology, which has the most direct bearing upon their science, and for which the different species of the family of turtles found in every part of the United States will afford them a better opportunity

even than the artificial breeding of hens' eggs. Moreover, the extent of my embryological researches, covering, as they do, all the classes of the animal kingdom, will furnish, I trust, a new foundation for a better appreciation of the true affinities, and a more natural classification of animals. I foresee the possibility, upon this basis, of determining, with considerable precision, the relative rank of all the orders of every class of animals, and of furnishing a more reliable standard of comparison between the extinct types of past geological ages and the animals now living upon earth.

I shall have frequent opportunities of acknowledging the many favors I have received from naturalists of all parts of the country, from the Atlantic to the Pacific Coast, and from the shores of our great Lakes to those of the Gulf of Mexico; and also of mentioning the many specimens which have been furnished to me from every part of the Union, and of which I shall publish descriptions.

It is a matter of course, that a work like this, illustrated by a large number of plates, cannot be published without a liberal and extensive patronage. As it has been prepared solely with the view of throwing additional light upon the wonderful diversity of the animal creation of this continent, its structure, and its general relation to that of the other parts of the world, without the slightest hope of compensation for myself, I trust I may meet with the approbation of those conversant with the importance of the subject, and receive sufficient encouragement from the enlightened part of the community to enable me to bring to a successful close an undertaking upon which I enter now, and in this form, for no other purpose than to contribute my share towards increasing the love of nature among us.

As the printing of this work cannot begin until a sufficient guarantee is secured for the publication of the whole, I take the liberty of making an appeal to the lovers of Science to send to the publishers their own subscriptions, and such others as they may procure, as soon as convenient, and, if possible, before the first of August next, that I may be able to proceed at once with a work which, relating to animals peculiar to America, I wish to make, in every respect, an American contribution to science, fostered and supported by the patronage of the community at large.

To render the work more generally accessible, it is intended to publish at the rate of about one volume a year. Such an arrangement will bring the whole within reach of every student of Natural History, and of every friend of the progress of science in the country. The periods of publication, however, cannot be more definitely fixed, because the required uniformity of execution of the plates, to which particular attention will be paid, will demand that they be all entrusted to the same artist, who has drawn on stone most of the plates of my former works.

Cambridge, May 28, 1855.

L. AGASSIZ.

*Treatment of Chronic Entropium by Collodion.*—Mr. Wm. Batten reports in a late number of the *Lancet* two obstinate cases of entropium, both of which had resisted a great variety of treatment, but which were cured by the application of collodion to the skin of the eyelid, previously corrugated by the thumb and finger. Several layers are successively applied and allowed to dry before the fingers are removed. The application is made at first every other day, and afterwards at longer intervals.—[*Boston Medical and Surg. Journal*.]

# SOUTHERN MEDICAL AND SURGICAL JOURNAL.

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## ORIGINAL AND ECLECTIC.

### ARTICLE IV.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.  
LETTER NO. 8.

MONTGOMERY, ALA., Dec. 17th, 1855.

*Messrs. Editors*—I do not intend to commit an act of supererogation by attempting a history of the practice of blood-letting, for the reason, that I have nothing to add to the many complete and valuable essays which have been written upon the subject, as none connected with the history of medicine has been more thoroughly discussed, as there is no remedy whose effects have been better understood by the profession, none whose value in the treatment of certain forms and conditions of disease is better established, and none more generally used— notwithstanding which, there are very few remedies which have been more misused or abused: and it is with the hope of correcting, to some extent, that abuse, and to vindicate its use, that I shall attempt an enquiry into the causes which have led to it. That the lancet, in skilful hands, has always, and deservedly, held the foremost rank among the remedies for the reduction of high states of nervous excitement and vascular action, and for subduing inflammation both local and general, there is no doubt; and that it will continue to hold the same rank with all intelligent physicians, there is as little, notwithstanding there may be a Sangrado now and then, who may “*change his method,*” and betake himself to “*chemical preparations.*” But the question is not whether the lancet or blood-letting is proper in



those conditions, but whether it is proper in those diseases in which it has been chiefly recommended? And here we are brought at the very threshold of our inquiries, in direct conflict with the nosological classification and arrangement of diseases; for, as I have said on a former occasion, the class of pyrexial diseases, the exanthemata, and febrile diseases in general, have the idea of exalted nervous excitement and increased vascular action, as intimately and inseparably associated with them, as heat is with fire; and the class of remedies, to-wit: antiphlogistics and sedatives, are as clearly indicated for their reduction, as water is for the extinguishment of fire. It is not, therefore, strange, that the lancet, which stands foremost among that class of remedies, should have been misused and abused, especially in those parts of the world where diseases of that class are not all of that character, indeed, where they seldom assume the character of high nervous excitement and vascular action, but where, on the contrary, they are usually characterised by the signs of depression and debility. But it is strange that this and other kindred remedies should so long have held a talismanic sway over the minds of Southern practitioners, or rather that they should have been so long in discovering that the same class of diseases which usually require the use of the lancet, cathartics, diaphoretics, &c., for their proper treatment in northern latitudes, seldom require or even tolerate their use in southern climates; and the most satisfactory explanation which can be given, may be found in the old saying, that it is "a hard matter to teach old dogs new tricks,"—for most of the Southern practitioners, and especially the older ones, having received their medical education in Northern schools, and derived their principles from books written by northern men in this country and Europe, who have uniformly held and taught the doctrines, that high nervous excitement and vascular action constituted the essential characteristic condition in all the diseases of that class, and properly enough, no doubt, for the reason that they found such to be their general character; and with such principles fixed in their minds, it is not unreasonable, but very natural to suppose that they found great difficulty in reconciling the character of diseases as they found them to exist in the South, with the character of the same diseases, as they had been taught to regard them in their northern aspect. It may be supposed, too, that those Northern writers, mostly Europeans, who have had an opportunity of observing the diseases of hot climates,

and who have furnished us with the best descriptions, as to the character of those diseases, were influenced in their minds by the same early impressions, of which they never could fully divest themselves, as is evidently manifested by the general inflammatory character and tendency of those diseases, according to their descriptions, and their general resort to the antiphlogistic plans of treatment, and the free use of the lancet and purgatives. And it is moreover evident that they were in the habit of regarding the opposite condition of depression as dependent upon adventitious influences, and consequently of a temporary and fugitive character, and comparatively of little import; and if the question was to arise, as to which of the two conditions constituted the *essential pathological condition* of those diseases, I would unhesitatingly acquiesce in the decision, that the character which they assume in northern climates, namely, exalted nervous excitement and increased vascular action, constitutes the essential pathological condition; and that their prevalence in southern climates, under the character and condition of depression and its consequences, is the result of extrinsic or adventitious influences. But, while acquiescing in such a decision, I would still maintain that, notwithstanding the admitted character of the diseases in northern climates, an opposite condition and character obtains with respect to the same class of diseases in the South; and the condition of depression, though depending upon adventitious influences, is as essentially pathological in all practical respects, and for all practical purposes, as if it was the universal and only condition; and I acquiesce the more readily in the decision, for the reason, that notwithstanding the adventitious influences which generally invest our diseases with the character of depression, (which I have already endeavored to point out and explain, and which it is unnecessary for me now to recapitulate—such as the influence of climate, meteorologic and epidemic influences, &c.) they often stand out in their full northern aspect, divested of almost every sign of depression. This, however, is by no means an event of uniform occurrence, for nearly thirty years of constant observation in the same locality, has served to convince me, that besides those causes which would necessarily produce a difference in the character of individual cases, under the same general influence, such as age, sex, temperament, &c., not only have diseases of a particular class, something like a cycle to run, and a definite period for recurrence, but

that the same disease often presents itself under very different, and sometimes new aspects, which changes we can ascribe only to the greater or less intensity of action of the adventitious causes or influences spoken of. It is this peculiar feature or fact, with regard to our diseases, which renders it impossible for our southern practitioners to follow successfully a uniform, or routine system of practice, but which renders it necessary that they should always be on the "*qui vive*," and constant lookout for those changes, and that they should at the same time be well fortified with correct views of general pathology, which alone is sufficient to enable them, at all times, to meet the emergency of such changes. It is this peculiar feature in the character of our diseases, which has suggested to my mind the propriety and the necessity of classifying them, according to the pathological condition under which they appear, without disturbing, or interfering with the general nosological arrangement and classification of these diseases; and the want of such a classification, or the want of proper attention to the pathological conditions upon which the classification is founded, and the habit which southern practitioners generally have indulged, of viewing and treating them in the aspect of their *inflammatory* character, has been the principal cause of error in the use, or the abuse of the lancet, and other kindred remedies hereafter to be considered.

Now, with respect to the classification which I have adopted, of dividing our febrile diseases, of whatever class or type, into the inflammatory or congestive, and the intermediate grades of irritant, congesto-inflammatory, and congesto-irritant, to which I would add the typhoid condition, being somewhat an *innovation* upon the usage of the profession, I deem it proper that I should offer a few arguments, in addition to those which I have already presented, in support of the policy or propriety of the measure.

Although Dr. Wood, Dr. Bartlett, and other late American, and some of the English writers, have improved largely upon the plan of the older ones, by adopting the more rational one of considering and treating diseases according to their physiological relations, and upon the broader principles of general pathology, they seem not to have recognized or considered necessary, any other division or classification of the grades of fever, than the one recognised by the older writers, under the names of synocha and synochus, the former representing the condition of excitement and



inflammation, and the latter that of depression and congestion; and while they recognise the condition of excitement as *inflammatory*, they recognise the opposite condition of depression under the terms *asthenic*, *adynamic*, or *typhous*. (See Wood's Practice, art. 5, Fever, sec. 3, Grade of Fevers.) "Besides the two grades of fever above described, (says Dr. Wood) there are often intermediate or mixed conditions, of which it is difficult to say to which they belong."

And here occurs the hiatus which I have attempted to close, with the classification which I have suggested; for though Dr. Wood has thus acknowledged the existence of intermediate or mixed conditions, he has failed or neglected to tell us what they are. But Dr. Wood further says: "The state of the vital forces on which these different grades depend, may pre-exist, or may be induced by the cause or causes of the fever itself. Whatever tends to increase the powers of the system, predisposes to the inflammatory condition of fever, whatever diminishes these powers, to the typhus." And he goes on to enumerate some of the leading causes which predispose to these conditions, concerning which, and the inflammatory condition, there can be no doubt or disagreement whatever; but his use of the term *typhous*, to express the opposite condition, creates a difficulty, to obviate which it is necessary that we should have a clear and definite understanding of the import and meaning of the terms. Now, the term *typhous*, which is synonymous with *typhoid*, is with us, used to express a condition in which, beside *depression*, there exists also a depraved and vitiated condition, or a broken constitution of the blood, with a certain hemorrhagic and eruptive tendency, such as petechia, sudamina, &c., and usually delirium and coma. And such is the idea of the condition which Dr. Wood, no doubt, intended to convey by the use of the term *typhous*: for, he further says, "But it also not unfrequently happens that the exciting cause of the fever is of itself of a depressing nature in relation to some, at least, of the vital functions, and that a typhous (typhoid) condition of the system, as well as the febrile movement, results directly from its operation. Such, beyond all doubt, is the case with the poisonous effluvia which cause the proper typhus fever, and to a certain extent, also, that which produces scarlatina," and to which I would add, yellow fever also. The character of the foregoing extracts shows very plainly that Dr. Wood's *typhous* condition is the same which

I have arranged under the *typhoid condition* with which *congestion* has little or nothing to do.

Having on a former occasion expressed my views with regard to the typhoid condition, which it is unnecessary, and would be irksome for me to repeat, and having from the very outset endeavored to prove the existence of a pathological condition of depression and congestion, as the true physiological, as well as pathological, antagonistic condition of excitement and inflammation, the opinions of Dr. Wood, and others to the contrary, notwithstanding, it remains only for me to say, that though both conditions are characterised by depression, they are altogether of a different character. That the depression of the *typhoid* condition relates chiefly to the cerebral and animal nervous system, and requires for its production an animal poison or effluvium, and has necessarily for its existence a depraved or vitiated condition of the blood, either as cause or effect, and does not necessarily require a disturbed balance in the circulation. While the *congestive* condition implies depression chiefly of the organic nervous system from the influence of atmospheric, meteorologic and malarial or miasmatic causes, and necessarily implies a broken balance in the circulation, and an undue accumulation of blood in the venous cavities, but does not necessarily require that the blood itself should be depraved.

With these views and explanations, with regard to the character of these conditions, and the classification which I have made of them, the necessity of which for practical purposes, I am, upon review, more fully convinced than ever, I shall proceed in conformity therewith, to the examination of the remedy in question, continuing as formerly to use pneumonia for illustration.

As remedies are valuable in proportion to the power which they possess, of increasing or diminishing the vital forces, and regulating and changing the vital actions, the lancet must always hold its rank among the most valuable, as it possesses the power in an eminent degree of diminishing rapidly the vital forces, and of moderating excessive vital action, and such being its power, such must be the necessity for its use. The first important and essential point to determine, then, is whether the general system is in such a condition as to justify or require its use, that is to say, whether there exists in the system such an amount of nervous excitement and vascular action, coupled with and sustained by, such an amount of vigor and tonicity in the general system, as to threat-

en vital organs with the invasion of inflammation, or to endanger the vitality of organs already in a state of inflammation, for blood-letting is often as important in such a condition as a prophylactic, as it is a therapeutic remedy. In ascertaining and settling this important and essential point, great nicety and precision of judgment is often required to determine, whether the excitement is sustained by sufficient vigor to constitute the inflammatory condition, or whether the excitement is a state of irritation only, dependant upon a state of debility, or atony of the general system. And to aid in arriving at a correct decision upon this point, it is necessary to keep in view, not only the peculiar symptoms present in each case, but to take in review the adventitious influences which are most likely to affect the condition, proximately or remotely, such as age, sex, temperament, habits of life, climate, seasons, epidemic influences, &c., &c., all of which, are not more necessary in determining the condition which requires blood-letting, than in determining the second important point, namely, the extent to which it should be carried, which, of course, must be regulated and controled by the practitioner, in each individual case.

As the advantages to be derived from blood-letting in local inflammation, which often exists under very different and even opposite conditions of the system, (as I have already shown to be the case with pneumonia, and in like manner, with other diseases) must necessarily be incidental to a general reduction of the vital forces, and of general excitement and vascular action, the only safe rule which can be adopted with respect to this second point is, that in attempting such a *reduction* by blood-letting, *no more* blood should be withdrawn, than will be sufficient to bring the general inflammatory condition of the system down to such a point as will enable other adjutory remedies, aided by the recuperative powers of the system to complete the reduction. This object may often be accomplished by the extraction of small quantities of blood, and at other times much larger quantities may be necessary to be drawn, and the operation may even be required to be repeated; but under no circumstances can we venture upon the use of the lancet, in the bold, fearless, and confident manner in which it has been recommended by our northern brethren, for the treatment of rheumatism, pleurisy, pneumonia, and other inflammatory affections; for the reason that the tendency of all these



affections, to the opposite condition of depression and congestion is so strong, as to admonish us, under the most imperative circumstances, to take hold of it with prudence and caution, and sometimes even with "fear and trembling." For fear that it should be suspected that the great prudence and caution which I recommend should be observed in the use of the lancet, is prompted by the working of a tender conscience, from the reminiscence of past misdeeds, it is but truth and justice to myself, to say, that upon the subject of the abuse of the lancet, I have nothing to "disabuse" myself of: for, in the days when the lancet was in the greatest vogue, and the standard of a physician's skill was measured by the number which he carried in his pocket, and his knowledge by the exact number of ounces of blood which his patient was able to lose, and the precise amount of purging which he could stand, without sinking under the operation, which the *test of experiment*, too often, *proved* to be fallacious; my voice was then raised, as now, in remonstrance against its reckless use, and consequent abuse, as the following extracts from my manuscripts written many years ago upon the subject, will show, and to which I have now, nothing material to add or take away:

"Although I fully appreciate the value and importance of blood-letting, in inflammatory diseases, when regulated by a proper discretion, I must confess that I have never been able to understand the propriety of bleeding for the purpose of preventing or removing congestion—a condition dependent upon a state of debility and depression, which the loss of blood cannot remove, but which, on the contrary, is always accelerated by it; for, besides the loss of the stimulus of the red capsules, and the fibrin of the blood by their extraction from the circulation, as well as the quantity drawn, the blood taken by venesection, comes not from the congested vessels, but from that division of the circulation (the arteries) which are already deficient of their due proportion, blood, which has just passed with difficulty the pulmonary extremity of the circulation, to be hurried too rapidly through the capillary extremity, (for such is the general effect of venesection) thus depriving the brain, heart, &c., of their accustomed and necessary stimulus, inducing syncope and convulsions, increasing the amount of depression and rendering the state of congestion more complete. \* It is owing to these effects of venesection, and the great tendency which prevails with all our diseases, to assume a congestive char-

acter, especially when aided by excessive depletion of any kind, which renders the use of the lancet a matter of so much caution, even in those cases which appear to be more decidedly inflammatory in their general character. The object of bleeding in any disease, is to protect or to relieve important organs from the effects of undue determinations and accumulations of blood, (understood to be arterial) the result of undue excitement in the general system, while the organs affected are the weaker ones. Hence, the extraction of blood is to be made in reference to a reduction of the general excitement, thus giving protection to weak organs, and enabling them to regain their lost tone and activity, and allow them to repair the damage which may already have been done. But in the effort at a reduction of the general excitement, great care must always be taken that it be not done so suddenly, or by such violent means, as to produce the opposite state of depression and congestion. Instead, therefore, of the erect posture, large orifice, and the draft of blood by the pint or quart, for the purpose of cutting off disease, or subduing inflammation by a decisive blow, our patients generally require to be bled, (if they require to be bled at all) when in a recumbent position, from a moderate orifice, and in quantities proportioned to the effects upon the *strength* and *frequency* of the pulse, and the general vigor of the system. In judging of the propriety of a resort to the use of the lancet in any case, the existence of *pain* which usually indicates the seat of inflammation, must be regarded as fallacious on account of the extent and play of the nervous sympathies, especially as this symptom is often more intense, and the ordinary signs of excitement are more manifest when the investing membranes are inflamed or irritated in a slight degree, than when more extensive and serious inflammation exists in the parenchymatous structure of organs. To justify the use of the lancet from these signs, the pulse should always furnish evidences of strength, (the sign of arterial plethora) the pain should be fixed and permanent, whether acute or obtuse, and the evidences of excitement continuous, irrespective of the influence of regular exacerbations and remissions. Nor can we recognise the *stage* of a disease, as acting either as a warrant or bar to its use, for the reason that it is often contraindicated in the earlier stages of a disease, when during its progress, and even in the latter stages, the necessity for its use may become imperative and absolute."

Now, it must be recollected that the foregoing remarks upon the use of the lancet, were penned many years ago, and before I had thought of making any systematic classification of the conditions which I then had in view, and which are now embraced in the intermediate grades between *inflammation* and *congestion*, to which they are as applicable now, as they were then, and if those intermediate grades which I have designated as *irritant*, *congesto-inflammatory* and *congesto-irritant*, had not existed, in fact, if not in name, my remarks would have been altogether unnecessary, as no one, I imagine, could have been found to deny the value of the lancet, or question the propriety of its use in the "inflammatory" condition, or who would have advocated its use in the "congestive" condition, upon any more rational or philosophic principles than would suggest the propriety of holding a man's head under water to prevent him from being drowned.

There is a condition or state of the system, which is sometimes met with and recognized as a state of *oppression*, which, though it has some peculiarities which might entitle it to a separate consideration, may very properly be arranged with the congesto-inflammatory varieties. It is observed in robust and middle aged, or old persons, and is characterized by a slow, full and moderately strong pulse, attended with many of the signs of depression and congestion—as palor of the countenance, a sense of prostration, with stupor or low delirium, a furred tongue and constipated bowels. This condition appears to be dependent upon torpor and congestion of the liver, with visceral obstruction, accompanied with a general arterial plethora, without inflammation, and will always be relieved by bloodletting. The typhoid condition, though usually characterized by the signs of depression, often presents cases of such unquestionable inflammatory character, sustained by such an amount of general vigor as to justify and require the use of the lancet—as in cases of *typhoid pneumonia*, yellow fever, &c., in which blood-letting often aids, not less in the elimination of poisons from the system, than in relieving or defending organs from inflammation; and in its use, the same rules of prudence and caution should always be observed, as in other cases which tend to a state of *depression*.

With a few general remarks concerning the *effects* of Bloodletting, I will bring this branch of my subject to a close:

Suppose, then, a general inflammatory condition, or such a con-



dition of *oppression* as I have just described, to exist, in which the arterial division of the circulation is replete to an unhealthy excess with blood, (the only condition which requires, or will justify the use of the lancet) and a vein be opened to allow of the escape of blood in any considerable quantity, the first general effect will be a reduction of the vital forces, which will be shared in by the heart, arteries and capillaries, and the latter becoming *relaxed*, from the loss of power, allows of the free passage of blood through them, while the lungs, sharing in the general reduction and loss of power, fails to transmit the blood as fast as it escapes through the capillaries, and the arteries become emptied, precisely in the same way as they do in the cold stage of an intermittent, though from a different cause. The effect upon the *action* of the heart, which, though sharing in the loss of power with other organs, (which otherwise would be reduced,) is to increase its action, or rather to accelerate its movements, in a like ratio as the arteries become emptied of blood. Now, if to the condition thus produced by bloodletting, we may suppose the lungs to transmit the blood as fast as it passes the capillaries in their relaxed state, and the heart should receive excitement, from increased excitement of the brain or other nervous centres, we will have before us the *irritant* and *congesto-irritant* condition—a condition, so far as external appearances go, similar to a state of reaction from the loss of excessive quantities of blood, and one in which the lancet may be used with about the same propriety.

As I expect soon to join the *anti-periodic* and *sedative* family, I hope none of the brethren will call me Old Fogy, for thus holding on to the old Sangrado “platform.”

In the bonds of friendship and physic, I remain, as usual,  
yours, &c. SAML. D. HOLT.

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ARTICLE V.

*Sulphate of Quinine in Uterine Diseases.* By JAS. C. BILLINGSLEA, M. D., of Tuscaloosa County, Alabama.

*Messrs. Editors*—Having seen Dr. J. S. Wilson's article in your June number, on the “Action of Sulphate of Quinine on the Uterus,” in which he solicits investigation and reports, I have concluded to give you some of the results of my experience and

observation, as regards the use of this remedy in uterine diseases. I am certainly of Dr. Wilson's opinion, that this great medicine acts on the uterus by some more *direct* and *specific* manner, than by simply relieving congestion or anemia; and in such a degree as to lead us to believe, that it possesses considerable emenagogue properties.

I had adopted this opinion, previously, from observation in my own practice, but felt a diffidence in bringing it to the notice of the profession through the press, yet I had expressed my views to some of the faculty privately. Since Dr. Wilson has given us his views, I take pleasure in giving any results, which may tend to substantiate his; and I do not know how I will do it better, than by giving you the notes of some cases I find in my case-book;

CASE I. Nov. 1st. 1853.—Called to see Mrs. —, in child-bed—first child. The patient is robust, and of good constitution. The labor was of usual duration, and terminated favorably. Everything went on well, until three days after confinement; then the lochia ceased. Pain in the uterus, slight peritonitis, and considerable fever supervened. I prescribed quinine 4 grains, camphor 2 grains, every three hours. After three doses, the lochia appeared, the pain ceased, and the fever abated. The patient went on well. Since then, I have used quinine in several similar cases, with a like result; and sometimes the lochia would be of a *sanguineous* character upon *reappearing*.

CASE II. Miss —, æt. 17, fleshy and florid, was attacked in the fall of '53, with severe headache, pains in the loins and abdomen, attended with much fever. I ascertained that she should have menstruated a few days prior to this, but she had by exposure gotten her feet wet, and the catamenia not appearing, she attributed her illness to the exposure. Ordered a saline cathartic, to be followed by quinine 4 grains, every three hours. Eighteen hours afterwards, I found her *quite deaf*, and fever gone; and was informed that profuse diaphoresis and the catamenia had appeared after the third dose of quinine. She recovered rapidly. I have since attended this young lady in two similar attacks, pursued the same treatment, with like results.

I have this year attended two cases of dysmenorrhœa, which I thought were materially benefited by the use of quinine, in sedative doses. For two years, I have used quinine in suppressio-mensium with great success.

*Remarks.*—The first case might well have stood depletion, by the lancet and purgation, but I contented myself with giving this sedative, with an anti-spasmodic; but I attribute the marked effect to the quinine. And this led me to use it in similar cases, and afterwards in amenorrhœa and dysmenorrhœa; so, that now, I feel even more sanguine, as to its effects in these diseases, than Dr. W. ventured to express. I desire not to make myself conspicuous by reporting these cases; but, I am so thoroughly convinced of the efficacy of this potent remedy, in certain uterine diseases, that I cannot refrain from adding my feeble testimony to that of Dr. W., who, ever seems ready with a vigorous pen, to give to the profession the results of his experience, in alleviating disease—(it's a pity there are not more like him.) And until I am convinced, by *experience*, that my practice in these diseases is not right, I shall pursue the same.

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ARTICLE VI.

*Gunshot Wound of the Brain.* Reported by Drs. HUBERT & CULVER, of Warrenton, Ga.

A young man, about eighteen years of age, was wounded in the head October 4th, 1855, by the discharge of a pistol. The ball entered the brain, one inch above and a little posterior of the left meatus auditorius externus. He was found immediately prostrate upon the ground, unable to give any account of the accident.

As soon as possible, he was visited by Dr. Sterling Gibson, and found in a very delirious condition, tossing himself to and fro on the bed, and speaking incoherently—pulse about 90 to the minute. From the wound, a small portion of the brain escaped mixed with blood. The wound was probed superficially only one or two inches, the ball was not felt and further probing considered imprudent. From the direction the probe entered, it was concluded that the ball had gone directly across the brain.

The case being considered hopeless, but little treatment was directed; chiefly cold applications to the head. He was sensible of pain; would answer when called very loudly, but could never reply to a question sensibly; he would swallow water by the spoonful and coffee also; but when weak soup was offered, he would spit it out invariably.

In this condition, with no notable change in symptoms, he re-



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mained about four days, when it appeared that the vital forces were yielding to physical laws. He gradually declined and died, surviving the injury five days and eighteen hours.

A post-mortem examination discovered that the ball had penetrated through both hemispheres of the brain and struck the lower portion of the parietal bone of the right side, indenting the inner table. Thus the course of the ball was almost directly across the brain, a little upwards and backwards. Had the ball passed entirely through the head, its exit would have been about one inch higher than its entrance and a little posteriorly.

The feature in this case of most interest, both to the surgeon and physiologist, is—how was life continued so long? Without indulging in speculative remarks ourselves, we submit it to the profession.

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*An Essay on some of the Distinctive Peculiarities of the Negro Race.*  
BY A. P. MERRILL, M. D.

No. II.

After what has been said, in a former essay, upon the anatomical, physiological and psychological peculiarities which distinguish the negro from the white race, it seems natural to infer the existence of certain equally striking peculiarities in reference to the diseases to which the negro is subject, and the action of remedial agents in their cure. To this, the more practical part of our subject, we bring, as in our former essay, little else than the results of our own experience and observations. We have met with no elaborate or standard work on the subject, and the few fugitive monographs, to which we have been able to refer, in the periodical journals, afford us little assistance in the well-established facts and practical arguments which they supply. In writing and speaking upon the subject of the diseases of negroes, physicians are apt to take it for granted, that the negro race undoubtedly has its peculiar and distinctive diseases, which require equally peculiar and distinctive plans of treatment; all which are to be described and illustrated, by separate and distinct practical treatises, upon the principles and practice of medicine, as adapted to this particular variety of the human race.

The facts in the case do not, according to our apprehension, justify this extreme view. Peculiarities undoubtedly do exist, requiring particular and careful notice, and to such an extent as to greatly impair the value of medical treatises as guides of practice, which have been written with reference to the diseases of the white race,

and particularly in European and northern countries. Still less can the principles and practice be applied to the negro race, which derive their importance from observations made in large cities, and in European hospitals and prisons. These remarks are applicable, also, to a somewhat less extent, to the white race, natives of hot climates; and the differences between the white and colored races in such climates consists, not so much in the existence of any distinct class of negro diseases, as in the modifications of the same diseases, as they affect the different races. It has been found true, with few exceptions, that whatever diseases prevail among one race, may prevail, also, among the other, under similar conditions, affecting the negro race sometimes more and sometimes less severely and fatally; but the disease itself is ordinarily characterized by the same, or very similar pathological conditions, indicating the application of similar therapeutical measures. It has happened very rarely in the southern states, that any disease has prevailed to a large extent, or become epidemic, exclusively among the colored race, and to which the white race was not subject under the same circumstances of exposure to its cause.

*The Pathological Peculiarities* of the negro race then, are dependent more upon their anatomical and physiological peculiarities, and upon their condition and habits of life, as these influence the action of causes of disease upon the human body, than upon any inherent and distinctive liability of the colored race, to the influence of causes of disease peculiar to it. It is true that epidemics not unfrequently prevail, which are confined mostly to negroes, both in city and country localities, but these do not differ essentially in their characteristics, from the same diseases as they attack the white race, whenever that race happens to suffer from them. Indeed it may be considered a very rare occurrence in the southern states, that the colored population is invaded by an epidemic from which white persons are exempt. There are seeming exceptions occasionally upon large plantations, where very few white persons reside; but even there, the overseer and other white subjects, undergoing similar exposures, are only a little less liable to attacks, which subject them to the disease in most cases at a later period in the season. Most of the epidemic diseases which prevail in the south, prove to be more violent and fatal to one race than the other, and attention is always required to the particular treatment suited to each, but the disease itself is the same, arising so far as can be known from the same cause, exhibiting in its progress very much the same local and constitutional symptoms, and requiring the application of the same general plan of treatment; the differences in the manifestations of the disease, and the differences in the curative measures required, being in fact mostly differences in degree, rather than in kind.

In treating, therefore, of the diseases of the negro race, as they appear in our southern states, we must allow ourselves greater lati-

tude, than would seem to be indicated by the expression, distinctive peculiarities; or, if this title be adopted, it must be understood as having reference, more particularly, to those peculiar differences, which are supposed to be dependent upon circumstances incidental to the negro, as fitted by nature for the enjoyment of health in a hot climate, and upon his habits of life as imposed upon him by his master, in a state of slavery. Vitality in negroes, as we have seen, is of a less vigorous and normal character, than in white persons; and there is, in general, less activity and acuteness in their nervous susceptibilities. These are peculiarities which tend strongly to modify the diseases to which they are liable, and such as call for a corresponding modification in the treatment. The pathological peculiarities, therefore may be considered as largely dependent upon the physiological; and therapeutical distinctions are required to be made, as in the different temperaments and idiosyncrasies of the white race, in accordance with the teachings of science and experience.

The habits of our slave population in living upon a more liberal and regular diet, and in being clothed with greater uniformity together with a good degree of regularity in the hours of working, and resting, and sleeping, as compared with the same race in a state of savage freedom, must, of course, have some influence over their functions both in health and disease, and also over the therapeutical operations to which they are subjected. Upon many plantations, it must be confessed, these things are not judiciously and skilfully managed. Ignorance of the proper physiological requirements of the negro, and mistaken views as to the true policy of the planter in giving liberal supplies of food and clothing, lead many who are engaged in the working of slaves, to practices at once injurious to their negroes and unprofitable to themselves. But it must be very rarely, if ever the case, that slaves are so badly cared for by their owners, as to render their condition worse, or more unfavorable to health, than in their native country, and in a state of savage freedom.

The vices too, which exercise such destructive influences over all ignorant and savage people, and particularly those vices which they derive from association with more civilized nations, are, in the case of the slave, constantly and vigilantly guarded against, by the interest and better judgment of the master. Intoxicating drinks, in the excessive use of which savage tribes are so prone to indulge, and which are proving at this day, so destructive to the lives of free negroes in all parts of our country, are not allowed to slaves except in a few instances, and at long intervals, unless prescribed as a remedy for disease. Drunkenness, therefore, is a vice which is almost unknown among slaves; and it is, perhaps as much due to the restraints imposed upon them in this respect, as to any other single condition of their state of bondage, that their lives and the vigor of their bodily and mental constitutions, are so well preserved from one generation to another; affording them chances for



intellectual and moral improvement, which they could not otherwise enjoy, and which is so essential to their ultimate elevation in the scale of being. Were the slaves of the southern states to be emancipated upon the grounds they now occupy, and permitted to indulge without restraint in the use of alcoholic drinks, all hope of such improvement in the race, in our country, would at once be at an end; and, instead of a progressive increase in numbers, as at the present time, there would undoubtedly be a rapid diminution of them, until extinction, as with some of the Indian tribes. The indolent and sluggish nature of the negro, renders him more liable to such consequences than the Indian, and unless he be perpetually guarded from the evil effects of a mistaken philanthropy, which wars against philosophy, religion, and law, such may, in the long future, be the fate of the negro race in America.

Although alcoholic drinks are withheld from slaves with such vigilant care, on account of their acknowledged evil tendency, the same is not true of tobacco, which is allowed in nearly all cases *ad libitum*. On sugar and cotton estates a liberal allowance of this article is not only furnished, in most cases, by the owner, but the slaves are, besides, allowed the privilege of cultivating any quantity they please, for their own consumption. The use of tobacco is, therefore, pretty general, the males indulging from an early age in both the quid and the pipe, while the females are generally content with the latter. Their sluggish nervous action preserves them, to a large extent, from the nauseating and sedative influences of this narcotic, in acquiring the habit of its use; enabling them to escape, if taken in moderation in the beginning, the severe ordeal through which most white persons have to pass, before they can become adepts in this common vice. It is for like reason, perhaps, that we observe less injurious effects of tobacco upon the nervous system of negroes than white persons, arising from the long habit of its use. It rarely ever results, in the case of the negro, in the establishment of those serious and often fatal nervous derangements, so commonly the effect of its habitual use, in the white race. If they could obtain it in sufficient quantity, negroes would prefer opium to tobacco, on account of its greater excitation of the mental faculties; and it is not improbable, that the habitual use of this drug may yet become a serious evil in the south, where the poppy can be successfully cultivated.

The southern slave, then, when he is controlled and cared for by a judicious, intelligent, and humane master, has all his principal habits of life so well regulated, and is permitted to indulge in so few health-destroying vices, as to protect him from the attacks of many diseases to which he would otherwise be subject, and moderate the violence and frequency of others to which he is constantly liable. Excepting the mortality which occurs among negroes in early infancy, of which we shall have something to say hereafter, the slaves of the south are probably subject to a less number and variety of

diseases, and enjoy a longer average duration of life, than the white population of any large section of our country. Upon well-conducted plantations, the natural annual increase is commonly estimated at three per cent., and but for the casualties among new-born infants, above alluded to, and from which scarcely any plantations are exempt, this increase would be much larger. Slaves are not more liable to suffer from discontent with their lot in life, than their masters, or other portions of the white race; and are, as a class, less influenced in health and spirits by mental disturbances and perturbations, calculated to exalt and depress the vital powers; and it is partly on this account, perhaps, that they are less obnoxious to the class of diseases called neuroses.

In making the foregoing remarks upon certain peculiarities of the negro race, we wish to be understood as confining ourselves to the unmixed portions of it. The mulatto or hybrid population, embracing various degrees of admixture of white blood, now amounting to a large number in the southern states, present some peculiarities of their own, which perhaps have hitherto received less attention than they deserve. However it may affect the question, of such interest to ethnologists, in reference to the diversity of origin of the human species, it cannot be denied, that the amalgamation alluded to, exercises important physiological and pathological influences, one of the tendencies of which is, to impair the energy of the vital forces, predispose to adynamic diseases, and to shorten life. These conditions, it is natural to suppose, must have a tendency, also, to the impairment of the procreative powers, and thus to retard increase; while the congenital debility and disordered innervation resulting, give rise to a still greater sacrifice of infant life, than with the full-blooded negro. These deleterious influences increase in force, as the mulattoes intermarry among themselves, and probably become more intense in proportion as they recede from the original stock; as they do, also, from further admixtures of white blood.

We venture to put forth these views, as the result not only of our own long-continued personal observations, but as embodying the opinions of many others of equally extended experience in such matters; and, what may be considered even more reliable still, as being a true representation of public opinion as it exists among all classes of southern people, and especially among the mulattoes themselves. Physicians of experience in the treatment of the diseases of negroes, whose opinions we have been able to obtain, are in general fully impressed with the truth of such views, and it is rare to meet with one, who is not constantly influenced by them, in his practice among this class of people. Still, it must be remarked, that the information obtained upon this subject, may not be of that exact and definite character, which should form the basis of grave ethnological conclusions; if such can indeed result from the actual determination of the question of deterioration either way.

As a practical question, however, we are by no means disposed to admit, that it can be at all doubtful, that the mulatto, or mixed race of all grades, is more liable to those diseased conditions, principally of the nervous system, and to those depressions of the vital energies, which are supposed to be predisposing conditions to tubercular and kindred affections, as well as to all the various phases of neuralgic disease; and which are presumed to present serious difficulties in the way of successful treatment in all chronic affections and cachexies. This may account, in a measure, for their want of prolificness, and for the prevalence of hereditary diseases among them, checking their natural increase, and curtailing the average duration of their lives.

There is, manifestly, a discrepancy existing between the physical and mental constitution of the mulatto, as affected by admixture of the blood of the two races. While the physiological and pathological deteriorations, above referred to, pretty constantly show themselves, and in tolerably uniform proportion to the extent of white admixture, and the remoteness of the hybrid from the original stock, the mental constitution, on the contrary, as constantly approaches to, and partakes of the superiority of the white race, in nearly the same ratio of relationship, and remoteness of descent from the original African. On this account this hybrid race are selected, in the slave-holding states, to occupy places of trust and responsibility, requiring the exercise of judgment and reflection, as well as tact and ingenuity; such as house-servants, carriage-drivers, market men, sugar-makers, cotton-ginners, drivers, &c., making themselves exceedingly valuable upon large cotton and sugar estates, in the performance of labors and trusts, which would otherwise be assigned to white persons hired for these purposes. The mental qualities of this class are not less strikingly exemplified, in the lives and practices of families of mixed blood in a state of personal freedom. Feeble as they generally are in their physical constitutions, they often become prosperous, trustworthy and skilful in their several occupations, which are nearly always other than agricultural pursuits. As nurses for the sick, laundresses, cooks, hair-dressers, mantua-makers, &c., the mulatto women of Louisiana are justly celebrated for their excellence; while the men of the same blood are scarcely less conspicuous as mechanics, porters, hotel-waiters, &c., some of them becoming successful and thrifty, also, as merchants and brokers.

Whatever use may be made of these facts in the ethnological controversy, it matters nothing to our purpose. The fact of the deterioration of physiological vigor, consequent upon an admixture of white and negro blood, and of the infusion of mental energy into this mongrel race, in proportion to the preponderance of Caucasian blood, are fully sustained by observation; and what is of more importance in such an inquiry, by the practice of slave-owners and others, whose judgments are sharpened by pecuniary interest. As



a class, these slave-owners may justly be ranked among the best informed and intelligent of American citizens. No branches of industry in this age of improvement more strongly exemplify this fact, by the improvements made in them within the last half-century, than those connected with slave labor. We may therefore safely receive the predominant sentiment and practice of these people, as acceptable evidence of the truth of almost any question, connected with the character and capabilities of the colored population. The constant and almost uniform practice, of selecting the mulatto, for the execution of ingenious enterprises, requiring the exercise of reason and judgement, is the highest proof of their mental superiority over the negro; while the preference as uniformly bestowed upon the latter, for the labors of the cotton and sugar fields, is equally good evidence of the superior physical powers of the negro of un-mixed blood.

But it is of the peculiar characteristics of the real negro that we propose, mainly, to treat in these essays, and principally with a view to the prevention and cure of the diseases to which he is principally subject, in a state of slavery. In speaking of his physiological and psychological peculiarities in our first essay, we briefly adverted to some of the precautions proper to be taken, in view of these peculiarities, for the preservation of his health. Much more might be said upon this subject; but it is our purpose at present to confine our remarks to a few of the commonly reputed causes of prevailing and epidemic diseases upon plantations in the south, so that when we come to speak of special diseases incident to the negro race, we can with better propriety confine our remarks to other branches of inquiry than those which relate to the question of etiology. This becomes the more necessary, because of the great uncertainty and discrepancy of views, in reference to the causes of disease, the unsettled condition of which question, does not in the least prevent the constant assignment of epidemics, to particular and specific influences, making the same disease the product of a great variety of distinct casuations, as it appears under different circumstances, and in different localities.

The febrile diseases to which slaves are subject, and which constitute more than one-half of all their sicknesses, like those which affect the white race in the south, are almost uniformly attributed to the influence of malarial exhalations. Fevers are, therefore, expected to occur oftenest and prevail most, in the near neighborhood of marsh lands, or upon low alluvial soils, into which dead and decaying vegetable matter largely enters as a constituent part. Our largest and most productive plantations are mostly situated upon just such soil as would seem best adapted, according to the commonly received doctrine upon this subject, to the production of this class of diseases. Yet it is notoriously true, that many such are particularly exempt from the prevalence of fevers, while others upon less productive, because less vegetable, soils are more liable

to them. Some which are situated upon the worn-out and impoverished clay-hills, which can be made productive only by a system of manuring, which seeks to enrich the earth by this artificial process about every third year, and others established upon sand-plains of moderate productiveness from the beginning of their cultivation, are constantly liable to visitations of periodic fevers, sometimes assuming a very grave and fatal character.

From all we can learn of the prevalence of periodic fevers among negroes, there is no part of the world in which they enjoy a greater exemption from them, than upon the shores of the Mississippi and some other rivers in the south, where the soil is, perhaps, the most productive of any in the world, from its alluvial character; and which contains a large proportion of dead vegetable matter, not only upon the surface, but to a great depth beneath; enabling planters, whenever their fields show signs of exhaustion from long-continued tillage, or from a want of rotation in crops, to avail themselves of the advantages of a virgin soil, by merely dipping their plow-shares a few inches deeper into the substratum of earth. It is not, therefore, from any *a priori* reasoning, that we can judge of the healthfulness of particular localities, in this respect. Experience alone is the safe guide in forming this judgment, as it is, also, in reference to other plantation diseases, arising from other causes.

Similar remarks are applicable to the etiology of other prevailing and epidemic diseases, such as pneumonia, cholera, diarrhœa and dysentery. Independent of those exciting causes which relate to errors in diet, clothing, exposure, &c., we know of no one condition which uniformly attends upon, or precedes their appearance among plantation negroes. Frequently it happens, that contiguous estates, whether similarly situated or not, are visited by epidemics of a very different kind, or one is visited while the other is exempt, without our being able, by the most careful investigation, to ascertain the existence of any essential differences either in the police of the places, or in the manner of living and exposure, to account for it. There is an epidemic influence of some kind existing, no doubt, and it is generally assigned to some apparent cause, for there is no subject about which men are more ingenious than the discovery of causes of disease. The water, the food, the exhalations from stagnant water, the influence of old buildings, shade trees, prevailing winds, &c., all come in for their share of blame; but if we scrutinize all these things carefully, we shall generally find, that precisely the same conditions have existed often before, without producing the same effects; while the same disease has often been known to appear, without the existence of the reputed causes.

We have known the yellow fever to become epidemic on a plantation which had always previously maintained a character for uncommon healthfulness, succeeding a general scraping and cleaning up of the place, with the removal of heaps of decaying cotton-seed, and other noxious accumulations, with the express view to

prevent the occurrence of epidemic disease. The general cleansing having taken place in the spring, and the disease occurring in the succeeding autumn, there could be no just reason for attributing the visitation to the exposure of decomposing substances, in the act of their removal. Upon another occasion, we have witnessed the rapid decomposition of several thousand bushels of sweet potatoes, stored in stables and other out-houses, near a very large negro quarter, and seen the rotten masses carted away upon the fields to be used as manure, subjecting nearly two hundred persons to the greatest intensity of putrid effluvia for several weeks, and without the occurrence of a single case of disease all the while, or subsequently, which could be attributed to such an influence. The harmlessness of decaying cotton-seed, which emits a very fetid and depressing odor, and of refuse cane, or begasse, together with the want of deleterious influence from large stables, and immense heaps of compost manure, all which are common upon cotton and sugar plantations, have had the effect to deprive both slave-owners and slaves, in many places, of all dread of the deleterious influence of vegetable decomposition, in the production of disease; and they are, consequently, disposed to ignore the common etiological theory upon that subject.

Nor do negroes, in general, experience much dread of the influence of contagion. Their religion or superstition makes them predestinarians or fatalists, and they therefore see the special hand of God in every calamitous visitation, not doubting that life and death are the inevitable consequences of particular and unalterable decrees of Providence, which can neither be suspended nor mitigated by human agency. They do not appear to suffer any the less on this account, however, from apprehensions and forebodings of evil, which tend to depress their vital energies, and thus predispose them to disease. As in epidemics affecting all other races of men, whether in cities or in country localities, the most important, and only certainly effective measure of relief, is removal beyond the infected region. Negroes are fond of changes of this kind, and repose great confidence in their efficacy; hence its powerful effect upon their spirits; and if these exciting influences are well sustained by liberal supplies of wholesome and nutritious food, by a little recreation and amusement, by encouraging conversation and advice, and by regular and systematic labor, they soon loose sight of their danger, and feel secure in the renewed buoyancy of their spirits.

Among other predisposing causes of disease, to which the field-laborer is subjected, no one, perhaps, has a more deleterious effect, than the practice of taking slaves out to their work, in the cool and damp air of early morning, with their stomachs empty. The principal meals are breakfast and dinner, and it is only at these, in general, that slaves eat meat. The dinner is ordinarily taken at twelve o'clock, after which, in summer, they are permitted to rest



from one to two hours, and sometimes longer, which interval is apt to be spent in sleeping. This secures rapid digestion of the dinner, and the supper which follows in the evening being a meager meal, consisting of corn-bread or hominy, with occasional additions of milk, it is reasonable to conclude that the stomach is pretty well emptied of food by morning, when they are subjected to the most chilling exposure of the whole twenty-four hours. The remedy which suggests itself to every physiologist is, to supply the stomach with food or drink, one or both, upon first rising in the morning, which is, indeed, the important period for the negro's lunch. A piece of coarse corn-bread, and a small cup of hot and well sweetened coffee, would answer the propose perfectly well; and the coffee might be charged, in times of prevailing periodic fevers, with a grain or two of quina as an antidote to the fever poison. Strychnia might be substituted in case of cholera or diarrhea, to give each person one-twentieth or one-fifteenth of a grain, as an antidote of equal efficacy, to the cholera poison.

To nothing do slave-owners attach more importance, in their efforts to preserve the health of negroes, than to the quality of the water used as common drink. And, with the single exception of the mistaken notion now prevailing somewhat extensively, that rain or cistern water is a certain prophylactic against cholera, the importance of the subject is not over-rated. Rain-water properly preserved in cemented cisterns, is undoubtedly the most wholesome of any in use, inasmuch as it is known to contain a less amount of mineral impregnations, and the vegetable and animal matters which may be infused, are in a short time, if permitted to stand undisturbed, precipitated to the bottom. That rain-water, however pure it may be, is not a certain preventive of cholera, has been too often proved to admit of further question. Doubtless the use of impure water is often a predisposing or exciting cause of this, as of other diseases, and therefore those who drink good water are less liable to suffer, than those who do not; but in no other respect can it be considered a prophylactic, than as wholesome food, and proper protection from vicissitudes of the weather, are prophylactic. All observation goes to show, that they who habitually drink well-water, made *hard or brackish* by solutions of the salts of lime and soda, are scarcely more liable to attacks of cholera, or other diseases, than others as habitually accustomed to the present cistern-water. Upon plantations, however, good cisterns are important, particularly on the low alluvial lands, because the wells dug in these soils, are supplied with water, to a large extent, by the percolation of the rains through masses of vegetable and animal materials, taking with them more or less of whatever is soluble; and these are the kind of impurities most to be feared, in their deleterious effects upon the slave population. But it must be considered, that slaves are not addicted to one of the principal habits which cause artificial thirst, the use of alcoholic potations, and therefore they consume less water

than intemperate white laborers would, under similar circumstances. The use of tobacco is the only habit which proves injurious to slaves in this respect, and this to a much less extent than intoxicating liquors, which are taken by white workmen with the water, constantly increasing the evil which it is their aim to remedy.

From all that has been said, it appears evident, that although the distinctive peculiarities of the negro as a southern slave, place between him and the white man a less extent of interval than some have supposed, yet there are, in his habits and character, as well in his bodily and mental constitution, such differences, as must render inapplicable, to a large extent, the teachings of medical authors, whose study and practice have been confined to the white race in northern latitudes. On this account it is of the utmost importance, that young men educated with a view to become southern physicians, should not only receive the advantages of southern instruction and experience, but should have ample opportunities to observe the habits, diseases, and treatment, of the slave population. If it be true, as has often been remarked, that the writings of European authors, who form their opinions upon their observations of diseases and treatment in large cities and hospitals, are not well adapted to instruct and qualify for successful practice, the physicians of the northern states of America, it is equally and still more strikingly true, that the same European authors, even when commented upon and explained by American editors, and even the writings and teachings of the eminent physicians of our northern cities themselves, can be but poorly calculated to give wholesome instruction, touching the diseases and treatment of the white population of the southern states. How much less are any of them qualified, however learned they may be, to give instruction for the successful management of the negro race in a state of southern slavery. As well might we expect, that the New England farmer would be qualified, for the successful management of cotton and sugar plantations, without southern teachings and experience in his particular calling.

The peculiarities of the mental constitution of negro slaves, render these special qualifications for practice among them the more important. No class of people more urgently require, that the physician who attends them in their diseases, should rightly understand their mental characteristics; without which, indeed, it will be found impossible to secure their confidence, and inspire them with the hope of recovery, so essential to success. They all have sufficient penetration to discover the existence of any want of acquaintance with their peculiar accentricities, and necessities, and whenever they adopt the belief that their physician is deficient in this respect, he labors under great disadvantages in his treatment, and in many cases all his efforts will, on this account, prove nugatory. When we come to treat of special diseases, we shall have occasion to show that no people can be more completely under the influence of the mind in sickness, than the negro race.—[*Memphis Med. Recorder*,

*Clinical Observations on the Peculiarities of Empyema.*

Dr. Finn exhibited to the County and City of Cork Medical and Surgical Society, March 28, 1855, some pathological specimens illustrative of empyema, and made the following clinical observations on the peculiarities of the disease.

*Influence of Sex.* In 30 cases, 25 were males—a result exhibiting a remarkable discrepancy between the sexes, in respect of liability to this disease; but which result, however, harmonizes with the general experience. In Dr. Hamilton Roe's table of 24 cases, 21 were males; in that of Dr. Hughes, of Guy's Hospital, out of 25 cases only two were females.\*

*Age.* The average age varied from 18 to 35, 4 only having exceeded 40, 3 not having reached the tenth year, the youngest having been about 5. According to Dr. Hamilton Roe, 12 or one half, were between 18 and 45; under 18, 6; above 45, 6; the oldest having been 62. According to Dr. Hughes, 18 in 25 cases occurred between 18 and 45; under 18, 4; and above 45, 3; the oldest having been 48.

*Side affected.* The left was the side affected in 19 out of 30 cases; in the several cases of effusion into the left pleura, displacement of heart towards the right side was observed; in one case of very considerable effusion into the right pleura, the heart was observed to pulsate in the left axillia. In no case that came under notice were both sides affected.

*Decubitus.* The cases observed were only seen at an advanced period of the disease, when the decubitus was almost uniformly on the affected side. In one case of circumscribed empyema of the left side, overlying the diaphragm† (which formed its floor, adhesive inflammation having united the opposed surfaces of the lung and diaphragm around it,) the decubitus was indifferently on either side, but more conveniently dorsal. In another case, the decubitus was on the unaffected side, notwithstanding the existence of dextrocardia.

*Pain.* In 9 only of 30 cases was pain complained of; and this varied much in its character, having been in some instances acute, whilst in others it amounted to a mere sense of uneasiness in the affected side, and sometimes in the opposite one. This result would suggest a conclusion quite antagonistic to the preconceived notions on this subject, pleuritis being *par excellence* associated in

\* It is not a little remarkable that, during the recent prevalence of ague in this city (which immediately succeeded the epidemic pleuritis forming the subject of these observations,) the influence of sex was also remarkably manifested, a comparatively small number of females having suffered from this disease.

† The inflammation in this case involved a portion of the diaphragm, which occasionally, under such circumstances, manifests a very high degree of sensibility, as referred to in the interesting article on "Pleuritis," in the *Cyclopedia of Practical Medicine*; and yet the subject of this case complained of no pain, but suffered much from constant irritability of stomach during the whole course of his illness.



the popular mind, with pain. A very slight acquaintance, however, with thoracic pathology suffices to demonstrate that absence of pain is not incompatible with pleuritis of a very decided character, as exemplified in those rigid adhesions which almost uniformly unite the opposed pleuræ in the vicinity of tuberculous deposits in the apices of the lungs. In tuberculous pleuritis, the inflammation takes the initiative in the pulmonary pleura; and a question naturally suggests itself—whether the absence of pain in such cases generally is to be attributed to its concentric origin? The author of the article “Pleuritis,” in the *Cyclopædia of Practical Medicine*, observes, however, that the pain present in such cases indicates the existence of tubercles long before they may be recognized by auscultation. This observation is not consistent with Dr. Finn’s experience, as he has rarely observed the subjects of tuberculous disease refer pain to the part of the lung affected; and in the majority of cases, pain, if present, was referred to the præcordia region, or in some instances to the unaffected lung, the increased requirements of respiration having imposed upon it a compensating duty. In pleuro-pneumonia, or pneumo-pleuritis, according to the more correct nomenclature of Dr. Watson, acute pain is referred to the region of the chest corresponding to the affected portion of the lung; but in this instance, in consequence of the sudden increase in the volume and consistence of the lung (the result of rapid engorgement,) the pressure on the costal pleura probably occasions the pain in question.

The susceptibility to pain of the costal appears to contrast remarkably with that of the pulmonary pleura, the nervous sensibility of the latter being modified by the laws which preside over organic life. Should any viscus, whether above or below the diaphragm, become the seat of organic change, the investing serous membrane is necessarily more or less involved, due allowance being made for the difference of the phenomena of serious inflammation in the localities referred to; and yet such deviations from the normal state, in which inflammation, in some form, plays its part, are not in general manifested by any consciousness of pain on the part of the individual.

In pleuritis terminating in empyema, the almost uniform coincidence of pulmonary disturbance suggests the probability of the concentric origin of that disease also; and this fact, if established, may offer, if not a solution, at least an approximation to one, of the absence of pain, and of the insidious progress which this affection so frequently presents.

*Relation between Pleuritis and Bronchitis.* In proceeding to canvass the subject of the relation between pleuritis and bronchitis, Dr. Finn recalled the attention of the society to the epidemic constitution which characterized the close of the year 1848 in this city. During the autumn of that year, on the occasion of the subsidence of the epidemic fever and dysentery of the years

1846-'47, influenza supervened, and prevailed with unusual severity to the summer of the year 1848. During that period and the two subsequent years, the writer exhibited, at almost every meeting of the Medical Society, pathological specimens illustrative of every variety of pleuritis, and specially called the attention of the Society to the remarkable frequency of this disease at the period referred to, as observed in the several hospitals in this city.

On inquiring into the history of each case, it was ascertained that this affection was preceded in almost every instance by bronchitis, or the prevailing influenza.

This result would appear to establish the relation of cause and effect between bronchitis and pleuritis, in the cases referred to in this paper, the congestion of the lungs, in the asthenic type of the former disease, determining more or less of structural change in the contiguous pleura; which change subsequently involves a corresponding extent of the opposed costal pleura; and this view is rendered further probable by the analogy offered in the order of succession of the pathological phenomena in phthisis and pneumonia\*.

*Tuberculous Disease of the Lung.*—Of 30 cases, only 2 died of tuberculous disease of the lung; in Dr. Roe's table, 3 out of 25; in that of Dr. Hughes, 6 out of 25 (a much larger proportion) presented that complication. The comparative infrequency of pulmonary tubercle, in connection with this affection, would imply that there existed a slight relation, if any,† between these diseases; and this view is further confirmed by the fact that the tuberculous complication in one of the cases was confined to the opposite lung; as if the serous inflammation, however much it may have interfered with the functions and altered the form and consistence of the lung, yet exerted a conservative influence in preventing tuberculous deposit. This exemption from tubercle should excite surprise, when it is taken into account that, in almost all the cases that came under notice, there existed a physical condition eminently calculated to call into activity the tuberculous diathesis.

*Bulging of the Intercostal Spaces.* In one case only was protrusion of the intercostal muscles observed. The subject of this case was a child, aged eight years, whose illness, previous to admission to the hospital, had been referred to phthisis; an opinion not confirmed by the physical examination of the chest, which immediately revealed the real nature of his illness, the intercostal spaces

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\* It may be important to observe that, contemporaneously with the influenza and pleuritis, the so-called cattle disease prevailed.

† In sixteen cases of empyema observed by Dr. Walshe, as referred to in the last edition of his work on *Diseases of the Lungs*, &c., no single case of hæmoptysis occurred.

at the left side occupying a plane considerably anterior to the ribs,\* whilst, at the same time, the heart pulsated under the right nipple. This case, after a very protracted illness, terminated fatally; and, on making a *post-mortem* examination, the affected pleura was found to contain an enormous quantity of fluid, entirely purulent. The result of the autopsy in this instance favours the views of those who connect protrusion of the intercostals with the purulent character of the contained fluid; but in two out of four other cases, which also terminated fatally, the products of inflammation were equally purulent in the absence of any change in the muscles referred to. The inference, then, appears to be, that the phenomenon in question is irrespective of the purulent character of the effused fluid merely, and that other conditions are necessary to its production.

*Paracentesis Thoracis.* In one case of great urgency,† this operation was resorted to, other means having failed to afford relief; and owing to a recurrence of the urgent symptoms, it was twice repeated with great benefit.

In this case, the expectoration, previously profuse and purulent, immediately presented a marked diminution in quantity, and alteration in quality, which both continued for several days.

This result coincides with the observations of the late Dr. Greenet‡ on this subject, and should perhaps excite surprise, as *à priori* reasoning would suggest the reverse, a large area of secreting surface being released by the operation from the pressure of the superincumbent fluid. The explanation of this interesting fact may probably be referred to the physical phenomena of endosmose and exosmose, the sphere of their activity being, in this instance, the portion of the pleura interposed between the effused fluid and the mucous membrane of the air-passages. Under such circumstances, the exosmose to the mucous membrane may be supposed to cease, or at least to be considerably diminished, on the occasion of the removal of the fluid contents of the cavity of the pleura.

Were fistulous communications between the lung and cavity of the pleura of frequent occurrence under such circumstances, a satisfactory explanation may thus be afforded; but such complications are rarely observed, and the pathological changes that ensue are admirably calculated to provide against this contingency; the investments of the lung being generally much increased in width, whilst the lung itself is diminished in volume.—[*Dublin Quarterly Jour. of Med. Sciences*.

\* The comparatively rare occurrence of protrusion of the intercostal muscles may further imply that the inflammation had its inception in the pulmonary, not the costal pleura; but, in the more advanced period of the disease, the internal aspect of the cavity of the pleura, when presented to the notice of the pathologist, is, in general, so assimilated by the structural changes observed, that it is impossible to assign to either pleura a priority in morbid action.

† In this case only, a loud splash was heard on succussing the patient.

‡ Dublin Journal, vol. xvii.



*On the part which Acidity of the Mouth plays in the Muguet of Infants.*

By Dr. SEUX, Head Physician to the Hospice de la Charité of Marseilles.

The mouth of the adult, which in health has an alkaline reaction, may in the morbid state become acid. Thus M. Donné has found the saliva to be acid in cases of gastritis, and it is known that in the muguet of the adult the mouth presents a very decidedly acid condition. This acidity has also been found to exist in the muguet of infants; in fact, M. Gubler, in a note on muguet inserted in the *Gazette Médicale* of the 26th of June, 1852, observes—"I ascertained that children labouring under this singular affection have always extreme acidity of the mouth. The mucus covering the tongue, the cheeks, and every other part of the bucco-pharyngeal cavity strongly reddens litmus paper even the moment after the child has suckled. This reaction exists before any trace of muguet is perceptible; but then there is already a very intense raspberry-like redness of the mucous membrane lining this first portion of the digestive tube; so that from the coincidence of these two peculiar conditions we may anticipate the invasion of the cryptogame." But it was especially important to ascertain if the mouth is alkaline in an infant in good health, as it is in the adult. In order to decide this point, I have made numerous researches, from which it appears that the mouth of children at the breast in good health is ordinarily acid. I have verified this fact repeatedly both in private and in hospital, and as well at the moment of birth as some days and even some months subsequently; I have found it to be the case whatever was the strength of the child, or whatever were the hygienic conditions by which it was surrounded. My observations have been attended with the same result in children who have continued well, as in those who have, at a later period, suffered from illness.

Not satisfied with having established the fact myself, I requested Dr. Magail, junior, assistant-surgeon to the Maternité, to undertake similar investigations, and the results obtained by him have agreed with mine.

I did not commit to writing the results of all the observations I had the opportunity of making; but the following are the details contained in the notes I possess on this subject:

These notes refer to one hundred children in good health, aged from a few minutes to ten months. Of these one hundred subjects, eighty-seven were at the Hospice de la Charité, and thirteen in private. In five only the mouth did not present a trace of acidity on the first examination, made some hours after birth; but on a second examination instituted in three of them two hours subsequently, the mouth was acid; in the ninety-five other children there was invariably proof of acidity from the first.

I have arranged these children in three classes: those who had

not yet suckled; those who had suckled, and had always been well; those who had suckled, and had had the muguet. The first class contained forty-nine; the second, thirty-eight; and the third, thirteen.

In the forty-nine belonging to the first class, the mouth was examined in eleven immediately after birth; in eight, some hours later, and in thirty, from two to three days after birth.

In the thirty-eight of the second category, the examination was made in thirty-four from two to fifteen days after birth; in three, from a fortnight to a month; and in one, in a little more than a month after birth.

In the thirteen belonging to the third class, I examined the mouth in nine, at the age of from a fortnight to a month; in two, at two months; in one, at four months; and in another, at ten months.

In testing the condition of the mouth, I made use of litmus paper rendered more sensitive by the addition of some drops of acid; this paper retained its blue colour when introduced into the mouth of an adult in good health. In the children of the three classes, it was more or less reddened. I did not observe any difference in the degree of reaction between the children who had and those who had not been suckled, nor between those who had just left the breast, and those who had not taken it for a long time. Neither was any difference perceptible between those who had not been ill, and those who had had the muguet. But a remarkable difference always existed between children at different ages. Thus at the moment of birth the paper was feebly reddened, at the end of some days, and particularly after the first fortnight, it was strongly reddened, and at two months, or later, it assumed a still more decidedly red color.

I had also frequent opportunities of examining contemporaneously children of the same age, some of whom had the muguet, while some were free from it; in all, the paper assumed the same red tint; in children of a month old especially, it was easy to appreciate this circumstance, because at that age the paper reacts strongly.

From the foregoing I infer:—1, that the mouth of infants in good health is acid; 2, that this normal acidity becomes more decided as the children grow older; 3, that suckling is not without influence on this acidity.

The fact of the normal acidity of the mouth of the infant being thus established, I am inclined to look upon this condition as a predisposing cause of muguet, for every one at the present day knows that the presence of acids is favourable to the development of the vegetable element of which this production is composed. This normal acidity of the mouth in infancy may therefore explain the predilection of muguet for that age.

Since, then, it is probable that acidity of the mouth in the adult

affected with muguet precedes this affection, it may, perhaps, be its cause and not its effect. It will be easy to ascertain if, in the adult, in the chronic diseases which are sometimes followed by muguet, the mouth is acid before the development of the latter. The facts I have just pointed out call for new observations, and for my part I shall neglect no opportunities of completing the researches I have commenced on this subject. Thus it would be important to know at what period of childhood the mouth becomes alkaline. Hitherto my object has been to ascertain the part played by the acidity of the mouth in the muguet of infancy; I think I have attained it in proving that it ought to be considered as a cause, and not as an effect of that disease, as this acidity constitutes the normal state.—[*Gaz. Méd. de Paris. Dublin Med. Press.*]

*Seven Cases of Tetanus.* Communicated by C. STILWELL, of Long Island, New York.

CASE I.—A strong, active woman, injured the sole of her foot by stepping upon a nail. A week after the injury, symptoms of locked jaw supervened. The spasms were regular and frequent. A consultation agreed in the diagnosis. *Treatment*—I administered half a drachm of tinct. opii. and one sixth of a grain of tart. antimony until one ounce was taken of the former, without any symptom of narcotism. Emetics were used after the eighth dose with a temporary relief of all the symptoms. I applied, to the entire length of the spine, a liniment of turpentine and laudanum, and administered half a drachm of sp. terebinth. by mouth, every two hours, until seven doses were taken. On the second day, the character of all the symptoms assumed more the peculiarities of hysteria than true tetanus. The spasms were of every variety. Emprosthotonos, opisthotonos and pleurothotonos would succeed each other. Recovery took place at the expiration of two weeks by a gradual subsidence of the spasms.

CASE II.—A lad of 12 years of age received an injury in the bottom of the foot. When called to him I found slight rigidity of the jaws and muscles of the back. He complained of an aching sensation in the back and neck. The expression of his countenance was anxious, and the corners of his mouth were slightly drawn down—closely approximating in expression the "*risus sardonicus*." *Treatment*.—I covered the wound with a tobacco poultice. Applied to the spine a liniment of tinct. opii., aconite and turpentine, and administered internally tinct. opii. and spts. terebinthinæ. There were no spasms, and recovery was immediate.

CASE III.—A man aged 35, of intemperate habits, slightly injured the nail of his thumb. A week after the accident, he complained of rigidity of the muscles of the neck. Complete trismus soon supervened, with regular spasms. He died on the third day.



*Treatment.*—Dover's powders and quinine every four hours, turpentine in drachm doses, with liniment to spine of tinct. opii. and terebinthinæ.

CASE IV.—A young mechanic, of sound health, received a slight contusion in the palm of the hand. A few days after the accident he was seized with a spasm. The jaws were locked for a few minutes. He complained of stiffness of the neck and back. The wound was opened, and a sedative poultice applied. A large tobacco poultice was applied to the throat, and Dover's powder administered internally. No further treatment required.

CASE V.—A lad, 12 years of age, was taken with idiopathic tetanus. I administered chloroform by inhalation, applied turpentine and laudanum to spine, gave turpentine and laudanum in large doses internally. He died.

CASE VI.—This case, of a boy 13 years of age, presented several peculiar and interesting phenomena. For several days previous to any alarming symptoms manifesting themselves, his countenance would assume at times a peculiar and sardonic expression. His parents threatened to punish him for *making faces*—not believing anything to be the matter with him. There was complete *trismus*, with general spasms, during which his body would form a complete arch on the bed. There was strabismus of both eyes. *Treatment.*—Quinine and Dover's powders. Turpentine liniment to back, combined with chloroform and laudanum, occasional doses of calomel to move the bowels, followed by enemata of turpentine and oil. He recovered in ten days by a gradual subsidence of spasms. For several weeks after convalescence he occasionally had a slight spasm. During his illness a *splinter* was discovered beneath the nail of the big toe.

CASE VII.—This case was a child, 10 years of age, and admitted of more doubt than either of the preceding. A consultation decided that it was idiopathic tetanus. There was no *trismus* or *stiffness of the muscles of the neck*, but the spasms were confined to the back and lower extremities. I applied lint wet with chloroform to the spine, until partial restoration occurred, and exhibited internally camph., tinct. opii. and chloroform every half hour. The spasms soon ceased.

That the eastern end of Long Island predisposes to this disease from slight causes, I think no longer admits of doubt. Every domestic animal, excepting the dog and cat, are subject to it. The emasculating process produces more accidents from this cause alone than all others combined. The nature of this endemic influence I fear will never be satisfactorily explained; the fact that it exists, I think, is proved. Where no cure is known, prophylactic treatment deserves increased attention. A domestic remedy of almost universal application here, is salt pork worn upon the wound. As all the cases I have treated had availed themselves of this application, nothing further can be said in favor of the "por-

cine fomentation." It has also been the custom here to have every wound opened, and, frequently, irritating liquids injected. I have never believed any benefit was derived from this course. Of wounds (particularly punctured and contused) I have never known a single accident occur when treated with tobacco and opium. Of the pathology of tetanus we are entirely ignorant. I believe the traumatic form originates first locally in the wound, and the excitomotory nerves become deranged from this local cause. The chances of successful treatment, then, consist in powerful sedative applications to the wound. But if the wound exists, then make the applications to the spine. Chloroform by inhalation gives only temporary relief—the frequent repetition soon exhausts the vital powers. Bleeding and warm baths I have never derived any benefit from. Active medication by mouth I think will disappoint expectations. Strychnine I have never used, but if any future cases present the opportunity for its trial I will give you the results.—[*Boston Med. and Surg. Journal.*

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*Opacity of the Cornea treated by Operation.*

Dr. M. Davis reports the following cases of opacity of the cornea treated by operation under the care of Mr. Haynes Walton and Dr. Taylor. A man about 50 years of age, a patient of Dr. Taylor's, had a quantity of lime thrown into his eye four years ago. The eye was immediately washed out, and it was supposed that all the foreign matter had been removed, but a dense white opacity remained, covering nearly two-thirds of the cornea, and completely concealing the pupil when in a state of medium contraction. Many ineffectual attempts had been made to remove or diminish the impediment to vision, by means of lotions and other local applications. On examining the eye minutely, it was seen that the opacity was smooth and uniformly covered by the epithelium; its upper edge, where it did not extend to the margin of the cornea, was shaded off gradually, and the surface generally appeared slightly more elevated than that of the clear part of the cornea. This elevation, taken in connection with the history of the case, led Dr. Taylor to suspect that the apparent cicatrix was formed by a portion of the lime which had not been removed at the time of the accident, and had become incorporated with the corneal tissues. He therefore with a fine iris knife, carefully raised the epithelium in front of the pupil, and found that, by careful manipulation, the opacity could be chipped off in small flakes, and that in no part, towards the centre of the cornea, did it appear to have penetrated the anterior elastic lamina. After clearing the pupil, the operation was suspended for the time, partly on account of the severe pain which it occasioned, and partly to avoid the risk of inflammation. On a subsequent occasion, the remainder was removed, with the exception of a few small spots towards the

margin of the cornea, which appeared to be due to interstitial inflammatory deposit.

The slight haziness which remained after the operation was speedily dissipated, and the man was dismissed with almost perfect vision. Chemical examination showed the opaque matter to consist of carbonate of lime.

In another case, also under the care of Dr. Taylor, the opacity was removed, partly by operation, and partly by the process of absorption, excited by mechanical irritation.

The patient, a female, 24 years of age, had been subject, till within the last six years, to attacks of ulceration of the corneæ. She now applied on account of a central milky opacity of the right cornea, shading the pupil and destroying useful vision in the eye. It had remained undiminished in size for six years, notwithstanding a great variety of local applications. Near the centre of the opacity were two small, dark-brown spots, situated apparently, in the substance of the cornea. These were, probably, the effects of a former long-continued use of nitrate of silver solution, while the cornea was ulcerated. The surface of the opacity was readily peeled off in small flakes, by a cautious use of the iris knife, but the brown spots were found to be so deep-seated, that Dr. Taylor did not consider it prudent to interfere with them, especially as they would not impede vision. The result of this little operation, which has since been repeated, has been the rapid diminution of the opacity, and corresponding improvement in vision; and as absorption is still going on steadily, there is every prospect that the sight of the eye will be completely restored.

It might be objected, that the following case ought not, in strictness, to be placed under the heading of this report, but it is given, not only on account of its great peculiarity, but because it is somewhat allied to the above.

T. P., aged 38, a meteorological instrument-maker, discovered, about four years ago, that the left eye was misty. The mistiness increased slowly, and attributing the failing of sight to the injurious effects of his trade, he disregarded professional advice, till the right eye had given evidence of the same kind of obscurity that had attacked its fellow, and now he applied to Mr. Walton. The eye first diseased, the left, is virtually blind, for nothing can be seen with it, as in the centre of the cornea there is a brown oval opacity, placed transversely, large enough to cover the pupil, and dense enough to intercept light. It is of a sepia colour, and shaded towards the extremities, not raised, and possessed of the same lustre as other parts of the surface of the cornea.

The right eye is affected in a similar manner, but in a less degree, and enough of the pupil is yet uncovered, that with a magnifying glass the coarser works of his trade can be executed. There have not been any subjective symptoms, and he himself is quite unaware that there are brown spots on his eyes.



Mr. Walton directed atropine to be used to the left eye, the effect of which was to dilate the pupil beyond the opacity, and thus to enable objects to be seen with that eye nearly as well as with the other.

The right eye was then treated in the same manner, and the vision was improved. The patient now expressed himself quite satisfied with the benefit received, and desired to cease attendance, but yielded to the request of Mr. Walton to attend another day, that he might ascertain how far the opacities were capable of being removed by operation. An attempt was made to scrape a portion of one away; but a clear surface beneath could not be obtained, as the disease had extended into the true texture of the cornea, and perhaps completely pervaded it.

Dr. Taylor, who had taken his microscope to the hospital, to examine, in a fresh state, whatever might have been removed, found that the portion separated consisted of epithelium, some of which contained pigment granules.

I must beg to observe that, so far as my personal experience goes, opacities resulting from loss of substance of the cornea; in fact, cicatrices and interstitial deposits from inflammation are not capable of being pared away, but depositions, for the most part consisting of earthy materials on the surface of the cornea, and the accidental impingement of a foreign substance, as in the first case, may be so removed.—[*Medical Times and Gazette*.

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*On the Occurrence of Cancer in Children.* By M. GUERSANT.

The subject of cancer in children is nowhere treated of, probably on account of the rarity of this affection during the early periods of life; however, there is not a year in which the author does not see some cases of it.

For a very long time, cancer was met in children only in the orbital cavity, whether it took its origin from the globe of the eye or from the base of the orbit. It has since been proved to occur in the testicles. Dupuytren operated on several such cases; M. Guersant has also removed six or seven testicles effected with encephaloid cancer. Cancer has also been found in other parts, but less frequently, unless in the vulva. Ought we now to make a distinction between fibro-plastic and cancerous tumours? M. Guersant is strongly disposed to class them together, on account, he says, of the tendency the former possess, in common with the latter, to relapse. He admits, however, that their relapse occurs less frequently; and in this point of view they have a character of relative benignity which should be borne in mind, but they are nevertheless, according to this surgeon, closely allied to cancer.

The progress of a cancerous affection in a child is much more rapid than at a more advanced age. At the Salpêtrière and Bicêtre, cancer is seen in old patients to remain stationary for from

fifteen to twenty years. In children, on the contrary, the progress of the disease is terrific. In a young boy, under M. Guersant's care for a cancerous tumour in the orbital cavity, the eye was driven out of the orbit in less than six weeks. The sufferings of this little patient were fearful; the globe of the eye was extirpated, but the disease returned with extreme rapidity, and at the end of a month the ethmoid was destroyed.

The prognosis in cancer in children is, therefore, very unfavorable; and because there is no chance of the disease remaining stationary, the indication is to operate with more rapidity and energy than in adults. But, on the other hand, relapse is so general and occurs so quickly, that we ought to resolve on operating only with the view of procuring temporary relief from intolerable sufferings; nor should we fail to warn the friends of the patient of the likelihood of the disease returning.

M. Guersant quotes, in support of these remarks, a case which terminated fatally; although on *post-mortem* examination, nothing but fibro-plastic tissue was found in the tumour, the destruction of which had been attempted. The patient had been a little girl, aged thirteen months, who had a tumor in the vulva. This tumor was tied by a surgeon on the 6th of November, and came away. The disease relapsed, and on the 18th December a second ligature was applied; relapse occurred still more speedily than on the first occasion. In January, the second tumor was pretty large, and its presence gave rise to sympathetic vomiting. The child was presented to the Surgical Society, the members of which body verified the existence of a multilobular tumour, with prolongation into the vagina. Although it was difficult to trace its limits, M. Huguier advised removal with the bistoury, and cauterization of its roots. M. M. Lenoir and Guersant were of opinion that the results of such an operation would be incomplete. However the tumour mortified, and the child fell into a state of marasmus. M. Guersant thought it advisable once more to have recourse to ligature; but the little patient was already exhausted, and sank in a few days from adynamia.

Should excision have been more successful? It is not probable. Nevertheless, in another case, M. Guersant considering such an affection as a sort of polypus, would excise it early, and cauterize its base with liquid caustics; and if the vagina was large enough to admit of these means, he would not despair of obtaining a more or less permanent cure.—[*Dublin Med. Press*, from *Jour. de Méd. et de Chirurg.*]

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#### Treatment of Chancre.

From observations conducted on a large scale at the Vienna Hospital, Dr. Sigmund concludes—1. Chancre can only be treated locally during the first four days, and the further we recede from

this, the greater the urgency of the general treatment. 2. The local treatment consists in cauterization, which effectually destroys all the chancreous exudation to the sound tissue. 3. The observation of more than a thousand cases during eleven years, assures Dr. Sigmund that secondary symptoms never occur when the chancre has been completely destroyed within the first four days. He is only aware of two doubtful cases in which cauterization on the fifth day even has not prevented accidents. The best caustic is the Vienna, composed of quicklime and two or three parts of caustic potass. Cauterization should also be practised even after the fifth day, for although the chances of preservation from secondary syphilis are diminished, they are not totally abolished; and we prevent the chancre being communicated to other parts of the same patient, or to other individuals. 4. The general treatment consists in the methodical employment of mercury, no other means curing so quickly and so surely. 5. In the exceptional cases in which secondary symptoms occur in spite of general treatment, they are not found in an aggravated form. 6. According to circumstances, the general treatment should be continued for six or twelve weeks. The levity with which the public and the profession at the present time regard venereal symptoms, should be met by the strongest opposition. 7. Clinical observations shows that every chancre, well diagnosticated, and not carefully destroyed, leads to secondary symptoms, if general treatment has not been instituted. This will be admitted by all who establish a rigorous diagnosis, and look for secondary symptoms soon enough where they are first to be found, viz: in the lymphatic glands. 8. Positive diagnosis is alone attainable by inoculation or the production of secondary symptoms. 9. Secondary symptoms are usually observed about the sixth week after infection, and very rarely later than the twelfth; and we must not always depend upon the patient's assertion, but make ourselves a rigorous search for their early manifestation. If between the sixth and end of the twelfth week no secondary symptom has shown itself, and the local manifestation has disappeared, the patient may be pronounced cured—the few exceptions that occur notwithstanding. 10. The amount of mercury administered varies according to the indications offered by different patients. The dietetic and hygienic management, both during and after taking the mercury, is too much neglected.—[*L'Union Médicale. American Jour. of Med. Sciences.*

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*Report on the Employment of Mathysen's Gypsum Bandage. By*  
DRS. GRIMM and JUNGKEN.

Dr. Mathysen's bandage was employed in thirty-six cases of fractures of various kinds early in 1854. The bandage is prepared by stretching it upon a table, and well rubbing powdered gypsum into it on each side. It is then rolled up or otherwise ar-



ranged, according to the use to be made of it. Immediately before applying it, it is dipped in water or other fluid, the limb being protracted by a flannel or other bandage prior to its application. Any portion of the bandage that is found not to have become wetted is moistened by a wet sponge. Flannel will take up twice as much gypsum during the rubbing as linnen; but it is more clumsy, and not so easily applied. If a very firm, immovable bandage is required, some of the gypsum, in the form of a thin paste, should be applied during the last turns of the bandage. Its appearance is much improved by passing a damp sponge several times along it while still wet, and at a later period it may be smoothly polished by means of glass. To remove the bandage, it only requires to be again well wetted.

The Reporters pronounce this bandage to be the best of all hitherto invented, including those that most resemble it, as the starch bandage, upon the following grounds: 1. The rapidity with which it hardens. 2. Its simplicity and easy application. 3. Its small cost. 4. The ease with which it may be removed—the linen composing it being available, after twenty-four hours' soaking, for new bandages. 5. Its firmness and immovability render it suitable for the most oblique and difficult fractures. 6. From its rapid hardening and its firmness, it is well adapted for those cases which require extension and counter-extension to produce coaptation of the fractured parts. The position obtained remaining unchanged, apparatus of extension, so uncertain in operation, and so annoying to the patient, is not required. 7. The ease with which it is borne. 8. Its porosity. Cutaneous transpiration is not quite suppressed, and if the fracture be complicated by wounds, ulcers, &c., these are indicated by the discharges making their way through the bandage. 9. The gypsum bandage is a good conductor of heat, and a bladder of ice placed over some oil-skin, around the fractured part, takes effect in five minutes. 10. When the bandage is properly applied, the form of the limb is so well displayed, that any irregularity of the fractured part may be judged of externally. 11. Its handsome appearance and regularity distinguish it from all analogous bandages. 12. Fractures seem to unite sooner under its employment.—[*Brit. and Foreign Med. Chirurg. Rev. from Anal. des Charité-Krankenhäuses.*]

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*The strictest Caution requisite in Chloroformization in Midwifery Practice.*

Dr. McClinton briefly relates (June 6, 1855) to the College of Physicians in Ireland, the history of a case of chloroformization in midwifery practice, in order to show the great necessity that existed for always using the utmost caution and circumspection in the employment of chloroform inhalation in labour, as well as the great importance of intrusting its exhibition to none but a medi-

cal man. He did so because the writings and practice of some of the foremost advocates for anæsthesia had led many persons to suppose that the administration of chloroform to parturient cases was almost, if not entirely, free from danger—a most dangerous fallacy, and one that would inevitably lead to disastrous consequences is generally acted on.

The leading circumstances of the case he brought forward were these: A healthy woman, aged 28, was admitted into the Lying-in Hospital, in labour of her first child, some days before. The first stage was very tedious, in consequence of an unyielding condition of the os uteri, and much general irritability. With a view to relieve this state, and to give her some rest, as she was much harrassed by frequent short pains, it was thought advisable to put her under the influence of chloroform. For about an hour she got it in small quantities—in fact, merely *chloroform à la reine*—but without experiencing any benefit, and without its producing any anæsthetic or soporific effect. The quantity put on the sponge a large cup-shaped one, was now increased, but still could hardly have exceeded one drachm, and was not more than is habitually given in the hospital to patients undergoing obstetric operations, to which cases its use is chiefly limited; and it was administered by the senior assistant, who has had ample experience of its use, having given it before in hundreds of instances. After the sponge was reapplied to her mouth, and she had taken three or four inspirations, a change came over her countenance, the eyeballs turned up, the pulse left the wrist, respiration was suspended for a space of time that would have occupied about three or four inspirations, and some froth collected at the angles of the mouth. On the first appearance of these alarming symptoms, the sponge was instantly withdrawn, the free circulation of fresh air was promoted, the face and chest were aspersed with cold water, and ammonia was applied to the nostrils. It should, perhaps, be mentioned that during the entire of the above period she was in bed, and lying down. Under the influence of these restoratives, animation gradually returned. It was evident, however, to all around—and many of the pupils were present—that she was all but gone, and that her life was preserved by the early recognition of the poisonous effects of the medicine, and the prompt and judicious employment of appropriate restoratives. Hardly any one will venture to deny that had this woman been in non-professional hands, her life would have been lost. That she got a dose of chloroform which, *to her*, was an overdose, is sufficiently obvious; and yet the quantity given, the quality of the chloroform used, the mode of exhibition, and even the administrator, were all the same as on hundreds of previous occasions, when everything went on favorably. Hence, then, the absolute necessity for *invariably and uniformly observing the strictest caution, prudence, and circumspection in the employment of this powerful agent, and never intrusting its ex-*

hibition to a non-medical person. A case that strikingly illustrates these remarks is recorded in the *Medical Times and Gazette* for April 14, 1855, where a lady died in the course of a natural labour, from the effects of chloroform administered to her by the nurse, on a handkerchief, without the sanction or knowledge of the doctor, who was in the house at the time. The quantity used in this case, with fatal effect, could not have exceeded five fluidrachms.

[*Dublin Quarterly Journal of Med. Science.*

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*Complete Dislocation of the Lower Jaw reduced by a new method.*  
By W. COLLES.

Miss——, æt. 25, whilst indulging in a protracted yawn, felt a jerk in the jaw, and found she could not close her mouth. She immediately applied to a medical man in her neighborhood, who recognized a dislocation, but failed in his efforts at reduction. She then applied to Mr. Colles. "The mouth was open, the symphysis of the jaw slightly projecting. On applying the fingers to the angle of the jaw, and tracing the ramus upwards, it led in a direction much anterior to the position of the articulating surface. The posterior edge of the bone could be most distinctly felt, and a broad furrow or hollow existed between the bone and the ear. The heads of the bone were felt and perceived prominent in front of their natural position, so that the face appeared broader at this place than natural.

"Before attempting reduction, I wished to ascertain the position in which I would have most command of the force to be used. Standing before her, I passed both thumbs into the mouth, but felt I would not have a position the most favorable for applying all my force, if necessary.

"I then stood behind her, and it at once struck me this was the position which afforded most advantages.

"Placing her head against my chest, I passed each thumb as far back on the corresponding side of the jaw as possible. By making a rotary motion from the wrist, I found the bone to yield; by now adding a motion of drawing the hand in towards the chest, the left side first, then the right, slipped into their positions, and the patient closed the mouth, the rows of teeth falling into their relative positions, and she now could speak plainly.

"I think there are many advantages to be derived from attempting reduction in this posture, viz: the surgeon standing behind the patient, the head applied to his breast, and the thumbs turned inwards on the corresponding angles of the jaw, the fingers under the bone in front.

"In the first place, the head is much more secure than in the original process, where it is applied against a wall, because in the latter the surgeon may press down the bone, and the patient gen-



erally will draw the head in the same direction by moving the body forward in the chair.

"By standing behind the patient, while depressing and pushing back the thumbs, he is pressing forwards with the chest, and thus fixes the head more steadily, and assists his manipulations; and even if the patient do move on the chair, a slight motion of his body will suffice to counteract this movement, and retain the head steadily fixed.

"Another advantage is, that he can use much more force, because when standing in front he can only use the muscles that depress the hands; whereas standing behind the patient he has the power of those muscles, and is assisted by the powerful class of muscles that rotate the thumbs inwardly; and, besides, in the former case his pressure is away from his body, whereas in the new position the pressure is more directly downwards and towards himself. The only disadvantage in this proceeding, if it can be considered one, is, that the mouth is stretched more than in the original plan."—[*Dublin Hospital Gazette*.

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*Cutaneous Nævi cured by Application of Iodine Paint.*

S. Edwards, M. D., relates two examples of this. In the first case, the nævus was unfortunately situated on the side of the neck of a female infant. At birth it appeared simply as a small, red shining spot, which in three months increased to the size of a four-penny piece. The mother of the child at this time positively refusing to have any escharotics employed, fearing that it might give rise to a permanent and greater deformity, I recommended astringent and cold applications to be applied constantly, and this was kept up for some time, but with no good result. The nævus at the end of ten months had acquired additional size, and was observed to become redder and a little more elevated, whenever the circulation was increased by crying, etc. The parents still refusing any of my former suggested remedies, or even of vaccination, "until it got worse," I recommended the use of iodine paint, which was regularly employed by gently painting over the surface with a camel's hair pencil every alternate day, occasionally leaving it off for three or four days when the skin was very irritable and rough. Under this treatment I was pleased to find that the growth of the nævus was arrested, became smaller and mottled, and finally disappeared; a speck or two being alone visible to mark its former site.

The second case was very similar; occurred in a little boy nearly two years of age. The nævus was about the size of a shilling, but slightly elevated, and situated on the abdomen, and had gradually, but very slowly, increased since birth. No treatment had been employed, the physician who attended the mother of the child, having advised nothing to be done unless it increased. The

tincture was commenced in September, 1854, and was continued more or less up to the last month, when the disease had disappeared, leaving scarce a trace of the mischief.—[*Med. Times and Gaz.*

### *Contagiousness of Puerperal Fever.*

M. Depaul believes that puerperal fever, especially when epidemic, is contagious. He relates the following examples. During an epidemic of puerperal fever at the Maternité, a midwife was entrusted with the case of a woman recently delivered, affected with a most severe metro-peritonitis. One morning this midwife, in giving the attention to the patient which her situation required, was powerfully impressed, and as if suffocated, by the emanations which escaped on raising the bed-clothes. The same evening a strong shivering fit occurred, her abdomen became very painful, pulse small and frequent, greenish vomiting, diarrhoea; at last all the symptoms most characteristic of puerperal fever. She died in forty-eight hours. At the autopsy the changes usually observed in cases of this nature were found, the tissues of the uterus being ulcerated. M. Depaul was enabled, moreover, to establish that this young woman was not only not in any form of puerperal state, but that she presented all the signs of virginity.

A physician was engaged in making the post-mortem examination of a woman who had died of puerperal fever, when he was summoned to attend a labour. Precautions of every kind, change of clothes, washing, could not rid him of the smell that autopsies of this kind commonly leave on the hands. The labour took place in the usual way, but in the evening the patient was seized with a most severe puerperal fever, and died the next day. M. Depaul relates also another similar case in which the woman died in a few hours.—[*L'Union Medicale. American Jour. Med. Sci.*

### *Pathological Anatomy of Chronic Hydrocephalus.*

M. Blache, in a communication read before the Academy of Medicine, describes the details of the pathological alterations resulting from this disease. The following are his conclusions:—

1. In internal hydrocephalus, the serum accumulates in the cerebral ventricles, but not in the cerebellar or fourth ventricle; it does not communicate with the cephalo-rachidean liquid.

2. Contrary to the opinion of some authors, the white and the gray substances are recognizable in the nervous laminae, into which the fluid pressure transforms the ventricular walls; when the distension has not been excessive, the circumvolutions are also to be found, and, in all cases, thickenings, which are the vestiges of them.

3. The corpus callosum, fornix, and septum lucidum, are almost entirely destroyed and converted into fibrous laminae.

4. The tuberculum annulare, the cerebellum, and the origin of the cranial nerves, preserve their integrity, with the exception of more or less alteration always existing in the optic and olfactory nerves.

5. The ventricular membrane is thickened so much as to be capable of dissection throughout its whole extent, by which it has been established to be continuous with the choroid plexus, and prolonged across the aqueduct of Sylvius and the foramen of Monro.

6. In the interval between the two laminae, which, by facing each other, form the septum lucidum, it is easy to demonstrate the existence of the fifth ventricle, and its communication with the third.

7. The pituitary body is canaliculated.

8. The anterior orifice of the aqueduct of Sylvius was found obliterated in the two cases where this was examined; the cerebral cavities were thus completely closed.

9. Regarding the nature of the malady, the absence of all softening of the cerebral substance, and the very slightly plastic nature of the fluid effused, discountenance the idea of chronic hydrocephalus being the result of inflammation. In our opinion, says M. Blanche, it is a pure and simple hydropsy.—[*Edinburg Med. Jour.* from *L'Union Médicale*.

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#### *Some Experiments on the Smoke of Tobacco.*

In Froriep's Journal, of a recent date, an interesting article has been published on the habit of tobacco smoking, and on poisoning by nicotine. Amongst the facts there mentioned, are the experiments instituted by M. Malapert, a pharmacien of Poitiers. His intention was to ascertain the exact quantity of nicotine absorbed by smokers, in proportion to the weight of tobacco consumed.

The apparatus used consisted of a stone jar, in which the tobacco was made to burn, connected with a series of bottles communicating by tubes. The bottles were either empty, or contained some water mixed or not with a little sulphuric acid. From a few experiments, it was found that, in the smoke of tobacco extracted by inspiration there is ten per cent. of nicotine. Thus, a man who smokes a cigar of the weight of seventy grains, receives in his mouth seven grains of nicotine mixed with a little watery vapour, tar, empyreumatic oil, &c. Although a large proportion of this nicotine is rejected, both by the smoke puffed from the mouth, and by the saliva, a portion of it is nevertheless taken up by the vessels of the buccal and laryngeal mucus membrane, circulated with the blood, and acts upon the brain. With those unaccustomed to the use of tobacco, the nicotine, when in contact with the latter organ, produces vertigo, nausea, headache, and somnolence;



whilst habitual smokers are merely thrown into a state of excitement, similar to that produced by moderate quantities of wine or tea.

From further investigations it is found that the drier the tobacco the less nicotine reaches the mouth. A very dry cigar, whilst burning, yields a very small amount of watery vapour; the smoke cools rapidly, and allows the condensation of the nicotine before it reaches the mouth. Hence it comes that the first half of a cigar smokes more mildly than the second, in which a certain amount of condensed watery vapour and nicotine, freed by the first, half, are deposited. The same remark applies to smoking tobacco in pipes, and if smokers were prudent, they would never consume but half a cigar or pipe, and throw away the other. Smoking through water, or with long tubes and small bowls, is also a precaution which should not be neglected.—[*London Lancet*.

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*On the Minute Structure of the Liver, and on the Nature of the Change known as Fatty Liver.* By M. A. LEREBoullet.

From this elaborate prize essay, which occupies many pages, we can only extract the author's summary of his observations on fatty liver.

"1. The fatty degeneration of the liver is due to the accumulation of fat in the biliary cells themselves. 2. Special fatty cells are not formed, as biliary cells would then be found amidst the fatty ones, which is not the case. 3. Nothing authorizes us to admit that fat becomes developed in the interstices external to the cells. 4. The biliary cells may, by the accumulation of fat, acquire double or triple their normal volume, this development of the cells explaining the increased size of the fatty liver. 5. These cells entirely lose their secretory character, and no longer contain biliary granules; the biliary secretion is obstructed, and the contracted gall-bladder contains but little bile. 6. The fatty degeneration induces a decolorized state of the liver, which progresses from the periphery towards the centre of a lobule, giving the organ a spotted and reticulated appearance. 7. The decoloration arises from the development of the fatty cells compressing the portal vesicles, and impeding the circulation in them. 8. In the artificial fattening of geese, the liver only becomes loaded with fat after the other organs of the body, and especially the abdominal viscera, have become saturated with it. 9. The cells of the liver of fattened geese differ from pathological fat cells, inasmuch as the fat that fills the former always retains the form of distinct droplets, accumulated in the cell, to which they give an irregular appearance on distension; while in the pathological cells the fat becomes united into larger and larger drops, until the cell is at last distended by a single one like a balloon. 10. The fatty cells in the goose resemble, as regards the disposition of the fat in the interior,

the physiological fatty cells of the foetus and those of the lower animals. 11. The nuclei of the normal cells, as well as the biliary granules, disappear when the fatty degeneration commences. 12. The degeneration takes place simultaneously throughout the organ, but all the fatty cells do not present the same degree of development. 13. This change of biliary into fatty cells is observed in tuberculosis, cancer, cirrhosis of the liver, &c. 14. The deposition of fat in the cells appears to be closely connected with a diminution of the nutritive process, and consequently of organic combustion, which is the primary condition of that process. When the quantity of oxygen absorbed is less than in the normal state (as in tuberculosis, cancer, and probably all diseases of nutrition); or, when the respiratory elements (fecula, &c.) are taken in too large proportions, the combustion of these substances is incomplete, and the chemical elements which enter into their composition combine so as to form fat, which is deposited in the biliary cells.—[*British and Foreign Med. Chir. Review.*]

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*A Sign of Congenital Syphilis derived from a Special Alteration in the Lungs.* By M. DEPAUL.

M. Depaul, in the introductory remarks with which he prefaces his account of this new sign, observes that a mother undoubtedly healthy may become infected by an embryo deriving its diseased condition from the father at the time of fecundation. He also regards constitutional syphilis as a much more frequent cause of sterility than it is usually supposed to be, and perhaps more especially when it exists in the man than the woman. When it does not prevent fecundation, it may prove fatal to the infant at various periods of intra-uterine life, or after birth. When death is caused at an early period of pregnancy, no anatomical lesion capable of accounting for this effect can usually be found; but when the disease arrests gestation later, it generally leaves evident traces of its existence. The skin, of all the other organs, is that in which its presence is most commonly manifested, pemphigus being the most characterissic form of disease, as long since pointed out by P. Dubois. In all but two or three of more than forty cases of pemphigus in infants, collected by M. Depaul, constitutional syphilis has been detected in one or both parents. His own observations have not shown him much with regard to the intra-peritoneal lesions described by Simpson as syphilitic; but he has met with cases in which traces of peritonitis co-existed with undoubted syphilitic lesions. He has several times found the fibro plastic deposit in the liver, described by Gubler, the children not usually dying until some time after birth, although contracting the disease *in utero*. He has also seen several examples of abscess of the thymus, regarded by M. P. Dubois, since 1837, as a pathognomonic sign of congenital syphilis.

In 1837, M. Depaul directed the attention of the Académie de Médecine to a change observed in the lungs of children born of syphilitic parents, viz:—the dissemination of multiple collections of pus through them; and in the fifteen years that have since elapsed, he has observed at least twenty such cases, the particulars of two of which are here given. Microscopical examination shows that these collections are not tubercular deposits; and M. Depaul believes that it is highly probable that the cases of tubercle in new-born infants given by Billard, Baron, and Husson, were really examples of this affection. It sometimes exhibits itself under the form of simple indurations, consisting of infiltrated pus, and at others of true abscesses, surrounded by more or less thickened walls. Formerly M. Depaul regarded these as the only two forms of the affection, but he has now several times met with another, which may be regarded as its first stage, and which consists in a greyish induration without pus, but attended with a deposit of a considerable quantity of fibro-plastic tissue. Sometimes the lesion occupies very circumscribed spots, but in other cases it is more generalized, invading several lobes. The pulmonary tissue is impermeable to air, even after repeated insufflation. These different degrees of the lesion are not unfrequently met with in the same subject. There are also usually other syphilitic lesions present, as pemphigus, abscess of the thymus, &c.

Various circumstances influence the prognosis in congenital syphilis. When the skin is affected, although the life of the child be seriously menaced, if the nature of the disease be recognised, and the treatment appropriate, it may sometimes be entirely cured. But when organs indispensable for the establishment of extra-uterine life become disorganized, as in this lesion of the lungs, it is obvious that death may ensue from a mere mechanical cause—the air penetrating in insufficient quantity. So promptly, indeed, does death take place, that the practitioner is disarmed; and hence the imperious necessity of combating the syphilis of the parents prior to fecundation, or seeking to mitigate its effects by prompt treatment of the mother during pregnancy. In M. Depaul's opinion, mercurial treatment is sufficiently justified, even if the existence of syphilis can be detected in neither parent, when the above described change has already been observed in a product of conception.—[*Ib.*

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*On the Etiology of Epilepsy, and the Indications of Treatment furnished by a Study of the Causes.* By M. MOREAU.

M. Moreau, as physician to the Bicêtre and different establishments for the treatment of the insane, has seen much of epilepsy. He believes that the very different accounts given by authors of the amount of success attendant upon treatment, arise from different pathological conditions having been confounded together.



Resembling each other much in their external manifestations, *true* and *pseudo-epilepsy* may, by hasty observers, be easily confounded. The convulsion, whatever may be its character, and a more or less complete loss of consciousness, do not in themselves constitute epilepsy, properly so called. They may assume an epileptiform mask, and may depend on various morbid conditions, disappearing on the removal of these. The cause is here everything, while the symptoms are of little import.

“Under these same sympathetic forms, a special disease may be also concealed, a deep-seated modification of the nervous dynamism, a special lesion of something unknown but no less real, which is termed a *neurosis*. It is a lesion independent of the various causes which may induce its external manifestation but do not create it, since it existed without and before them, and because, to use the language of the schools, it is *essential*. Here the importance of the cause entirely disappears in presence of that of the symptomatic phenomena. We speak here of exciting not predisposing causes, which, in our opinion, are not separable from the disease itself.” (tom. xviii. p. 5.)

It is the confounding essential and sympathetic epilepsy that has given rise, according to M. Moreau, to the vague and uncertain views which prevail respecting the etiology and treatment of the disease. In his view of the disease, it is the predisposing causes of epilepsy that are of fundamental importance, being, so to say, the disease itself; and it is through these alone that the malady is, if anywhere, vulnerable to attack. He considers them at considerable length, and we proceed to reproduce his principal conclusions.

1. *Physiological Predisposing Causes:*

“(1) *Hereditariness*.—Of all the predisposing causes of epilepsy, the most serious and fertile, the one whose action is most certain and inevitable, attacking the majority of, or even all epileptics, and embosoming, so to say, the secret of the disease, is *hereditariness*—an expression which, in our eyes, comprises the conditions of organization in the double point of view of physiology and pathology of the ascendants and collateral relationships in which the descendants derive their predisposition. Thus comprehended, hereditariness constitutes the essential and truly fundamental part of our work. The principal source of the disease, this it is which furnishes the least vague indications, and those that are most easy of fulfilment for the prevention and cure of the disease.” (tom. xviii. p. 17.)

To the term hereditariness, the author gives a far wider acceptance than that generally received—the mere transmission of a similar disease from the ascendants to the descendants. He believes that any abnormal conditions of the nervous system, the precise mode of manifestation of which may differ, may prove efficient; hereditariness, indeed, resulting from such transforma-

tion of diseased conditions, playing an important part. Mere simple nervous irritability, slight convulsive movements or tics, have their hereditary influence; and, in fact, nervous disturbances of all kinds, whatever their symptomatic form, whether simple or complex, predispose as much to epilepsy as does epilepsy itself.

Among the predisposing causes we must also range (2) *Drunk-  
enness*. This is well known to be a frequent cause of insanity; and the mutual connexion of all nervous affections, especially of epilepsy and insanity, leads to the expectation of its effect proving alike in both. Again, (3) *Phthisis* acts as a predisposing cause, as shown by the number of phthysical persons found among the relatives of epileptics. There seems, indeed, also a remarkable consanguinity between phthisis and other cerebral disorders having an affinity to epilepsy, such as insanity and idiocy.

In support of these views, M. Moreau cites the particulars of 124 cases of epilepsy which have occurred in his own practice. In 44 of these, individuals below the age of puberty, 83 of their relatives (ascending as high as grand parents, and embracing uncles and aunts as collaterals) furnished 100 pathological conditions. Among 51 male adults, 113 pathological conditions were discovered in 115 relatives; and among 29 epileptic women, 71 such conditions were noted in 57 relatives.

The following are his conclusions upon a review of these cases. 1. The hereditary sources of epilepsy are far more numerous than usually supposed. In these 124 cases, epilepsy itself occurred among the relatives in 30 instances, insanity exhibited itself in one-fifth, hysteria in one-ninth, and paralysis and apoplexy in about the same proportion. In 30 of the cases the influence was traced back to the grand parents. 2. In the great majority of cases the epilepsy is not the product of any single pathological condition, but of several united, whether occurring in the same relative, or distributed among several. 3. When we observe the relatively large proportion attained by certain conditions, which have not hitherto been supposed to be related to hereditariness—as eccentricity, cerebral disturbances of all kinds, drunkenness and phthisis; and when we observe that these conditions intermingle, alternate with, and replace each other among the ascendants, we feel justified in attributing to them the large part we have. While in these 124 cases epilepsy manifested itself 30 times, drunkenness did so 24, insanity 26, and phthisis 35 times. 4. Cerebral accidents, paralysis, apoplexy, congestion, &c., were found in 52 instances; paralysis alone occurred in one-twentieth of the cases, and the frequency with which this condition is met with among the epileptic themselves is an additional reason for attributing to it hereditary influence. Forty examples of it were observed among 240 cases of epilepsy at Salpêtrière. 5. These considerations exhibit the powerful special predisposition the majority of epileptics are born with; and it may be predicted that a family having the appa-

ratus of innervation thus injured, must, sooner or later, furnish descendants suffering from epilepsy; and probably there is no other disease that furnishes such strong proofs of its hereditariness. In such persons there is a special condition, an excess of excitability of the nervous system, which perhaps only awaits some insignificant occasion to become transformed into a morbid individuality. 6. We see in this remarkable hereditary predisposition a true neurotic diathesis, which explains the essential character of true epilepsy, and its resistance to curative agents. Epileptiform convulsions may manifest themselves, whether predisposition exists or not; but when the apparatus of innervation is in a normal state, the cause and effects will appear and disappear together. When it is deeply vitiated by hereditary predisposition, it is in vain we remove the occasional cause, for the disease existed in a latent state prior to its advent, and will persist after its cessation.

(4) *Sex*.—It would seem *à priori* that sex should exercise a predisposing influence, and that more women would suffer from the disease than men. Several authors, indeed, have stated this to be the fact; but the records at Bicêtre and Salpêtrière, for a considerable period, show that it prevails much more largely among men. In respect to the influence (5) of *Age*, M. Moreau's experience is in accord with that of other observers. In a total of 995 cases, the disease commenced at birth in 87; before ten years in 306; between ten and twenty, in 364; between twenty and forty, in 170; and between forty and sixty, in 68 cases; the greatest number becoming developed first between ten and twenty years, next between two and ten, and then between twenty and thirty. (6) *Temperament*.—The author's experience goes to show, at least as far as women are concerned, that lymphatic and scrofulous temperaments are more predisposed, the sanguineous coming next.

2. *Pathological Predisposing Causes*.—By those who include sympathetic epilepsy in their consideration, there is no malady or lesion that may not give rise to the disease; but even under the strict limitation imposed by the author, certain diseases may be regarded as predisposing. Among 364 epileptics, convulsions occurred in 79, for a longer or shorter time, prior to epilepsy manifesting itself. Of 671 epileptic women at Salpêtrière, 61 suffered from some form of hysteria. In most epileptics who suffer from paralysis, this is a co-existent or consecutive affection; but it occurs too often prior to the epilepsy to allow of our denying all causality. Eruptive disease of the scalp and small-pox seem in several cases to have excited some predisposing power. M. Moreau believes an etiological value they do not deserve has been attributed to the pathological changes in the nervous centres, so often observed in epilepsy. Imperfect development or vicious conformation of the cranium is often observed in congenital epilepsy, which is frequently combined with idiocy or imbecility; but on examination of the heads of 500 epileptics in whom the disease became developed at a later period, M.



Moreau could detect nothing remarkable. The condition of the system which results from venereal excess or onanism highly favors the operation of slight occasional causes. Like other observers, M. Moreau has met with many cases in which the epilepsy became first developed during sexual intercourse. The chlorotic condition is often observed in female epileptics, and may furnish useful indications of treatment. The nervous condition plays as important a part as regards the individual, as it does in relation to hereditary influence. A remarkable peculiarity of this condition is the tendency the various accidents constituting it exhibit of replacing each other, and undergoing the most varied metamorphoses and unexpected transformations—fully justifying M. Cerise's appellation, *proteiform neuropathy*. Moreover, these proteiform phenomena have not only this disposition to succeed each other, but, what is of far greater consequence, they exhibit a marked tendency to transformation into more serious forms of disease, possessed of more definite, fixed, and complete characters, so as to pass into some of the great neuroses—as hysteria, insanity or epilepsy.

3. *Predisposing Causes independent of the Individual.*—The author, although convinced that the belief so generally entertained by epileptics, that changes in the moon influence their condition, is a popular prejudice, resolved nevertheless to give the question an attentive examination. He furnishes a detailed table, exhibiting the entire number of attacks 108 epileptics suffered during five years. The total of these amounted to 42,637, of which 16,324 only occurred at the lunar phases, and 26,313 in the intermediate periods. The same tables enable the author to give a similar negative response to the question, whether extremes of temperature exert any influence. The number of attacks which occurred in the different months of the year were remarkably similar. The affection has been sometimes said to be endemic, as in mountainous countries; but it is then frequently associated with idiocy, and may depend on local causes. The operation of endemicity, too, has been confounded with that of hereditary influence.

4. *Occasional Causes.*—So great is the importance of hereditary predisposition, that, in M. Moreau's view, it absorbs all the interest of the case, the occasional or exciting causes being, in its presence, of little importance. With the progress of science, the immense number of those admitted by the oldest writers have undergone great diminution. On an examination of his own and other observers' statistics, he finds that moral causes seem to have operated in 444 instances as compared with 85 physical; 364 of these being referable to the influence of fear in some of its varieties. One fact all authors are unanimous in admitting, viz:—the great tendency nervous attacks have to be reproduced under the influence of the same occasional causes that first called them forth. M. Moreau believes that the production of congenital epilepsy is not so frequently due to terror on the part of the mother as is

generally supposed. He also doubts whether imitation can give rise to true epilepsy, although there can be no doubt of the ease with which the sight of an epileptic paroxysm induces the like in one liable to the disease. As to the influence of physical causes, such as blows, or wounds of the head, &c., it is difficult to distinguish this from that of the accompanying mental disturbance. Drunkenness is an exciting, as well as a predisposing cause; and epileptics are, in general, much disposed to the abuse of alcoholic fluids. In respect to epilepsy excited by intestinal worms, the more exact observation of modern times only admits epileptiform convulsions being thus producible, although in a child strongly predisposed, hereditarily, true epilepsy may ensue. It is certain that epileptics are not liable to worms more than other persons.

5. *Indications.*—Although M. Moreau again dwells upon the importance of duly appreciating the potency of hereditary predisposition in our treatment of this disease, we cannot discover that he puts forward any novel suggestions derived from this consideration, as guides in preventive or curative treatment.

Adverting to the *empirical treatment* of the disease, he observes, that every agent capable of exerting a modifying influence on the nervous system has been again and again tried, further experience failing to confirm the existence of virtues at first announced. The only substance the claims of which he examines, is the *oxide of zinc*, which has recently been so prominently brought forward by M. Herpin. By a believer in the almost incurability of true epilepsy like our author, the statements of Herpin (that he cured 26 out of 48 patients, and ameliorated other 10, only 12 resisting all treatment) would naturally be received with utter incredulity. He nevertheless entered upon a series of trials with this agent, the results of which in no wise corroborated these statements; and he attributes their having been made to inexactitude and hasty observation—the diagnosis in some of the cases being founded on hearsay evidence, while in others, the patients had not been long enough watched after their reputed cure.

With respect to the claim set up for epileptic remedies, that they produce some relief and diminution in the violence of the symptoms, M. Moreau observes:

“Whatever may be thought by many estimable practitioners, we must confess that we altogether reject this statement, for the following reasons:—Every one knows that there are few remedies (or I might say there is no remedy) which, when first employed in the treatment of epilepsy, does not give rise to some apparent advantage. Is this attributable to the action of the substance itself, or merely to the imagination of the patient? We are of opinion that it depends a little on both; for we have seen these substances act in much the same way upon individuals susceptible to the influences of imagination, and those that were not so. It would seem that, in this great perturbation of the neu-

rosity, every agent capable of modifying in any manner the disordered condition of the nervous system, may produce temporary relief. However this may be, it is a fact for me beyond all dispute, that the improvement thus obtained, the few days of respite gained, are almost always, a little sooner or later, dearly paid for by the prevalence of a worse condition than before. The more sensible the amelioration seems, the more reason have we to fear the violence of the disease when it reappears." (tom. xviii. p. 156.)

Thus far no anti-epileptic has been discovered; but M. Moreau thinks, somewhat inconsistently with the above statement, that, in so exceptional a state, we should try and re-try every substance that may possibly exert a modifying influence on the nervous system. The so-called rational treatment, founded upon the endeavor to operate indirectly upon the nervous system, by remedying faulty general or partial derangements of the entire organism, has met with little more success, if any. Attempts have been made to cut short the disease by attacking a particular symptom, sometimes present—the *aura epileptica*. Various applications have been directed to near the spot where this manifests itself; but the benefit reported by Portal and other old writers to have accrued from these, probably arose from mere epileptiform diseases having been dealt with. It is possible, indeed, that temporary benefit might result, even in true epilepsy, from the effect produced upon the imagination.

Notwithstanding the highly unfavourable prognosis M. Moreau delivers in regard to true epilepsy, he yet admits that a cure does occasionally take place—this result, however, seeming rather due to the operations of nature than to any form of medication employed. Hippocrates pointed out the importance of regimen; and all subsequent authors have echoed or amplified his recommendations. M. Moreau also declares, that if any practical indications are deducible from his study of the causes of epilepsy, these are embodied in the precepts of Hippocrates. In a constitution so deeply tainted by hereditary influence, all has to be remodelled and changed. The indication is to amend, by every means art places at our disposal, the morbid disposition amidst which epileptics are placed; and for the production of modifications and transformations like these we can alone look to *hygiène*. Without dwelling upon the well-known laws of this branch of preventive medicine, M. Moreau adverts to one or two points of importance:

1. An almost indispensable condition is a change of climate. No importance, in this respect, can be attached to any particular climate. The essential thing is to change the one to which the patient has been hitherto accustomed. By this very change, the whole physical and moral habitudes undergo, though slow, yet certain modification, provided the sojourn be sufficiently prolonged.
2. Remove from the patient all that may over-excite his intellectual functions, and develope his sensibility, passions, and



affections, while you at the same time engage him in manual labour, or other exercises favourable to the development of muscular energy. Exercise in the open air, and the employments of a country life, where alone the requisite calmness and tranquility can be found, seem to fulfil these conditions in the best possible manner. Gymnastics, too, have been found at Bicêtre and Salpêtrière to exert a most beneficial effect upon the health of the insane and the epileptic. They should, however, only be employed under medical superintendence. 3. Food. Without doubting the importance of duly attending to the diet in epilepsy, M. Moreau does not advocate the adoption of too minute regulations. Sobriety and temperance are essential; and all drinks capable of exciting the nervous system—as tea, coffee, and, above all, alcoholic fluids—are to be avoided. The diet should be ample and reparative, but not in excess.—[*Ib.*

*A General View of the Results obtained by Subcutaneous Surgery.*  
By M. GUERIN.

In a paper submitted to the Académie des Sciences, M. Guerin declares that all his subsequent experience is only confirmatory of the statements made by him in his celebrated memoir in 1839. In a general review of the subject, he here re-states in a summary manner, the principles upon which subcutaneous surgery is based, and the practical applications it is susceptible of.

1. *Tissues when divided under the skin undergo immediate organization.*—In the first memoir, he showed that if the absence of contact of the air, and hermetical closure of the orifice of the incision were secured, immediate organization, with an absence of local and general reaction, resulted. He now adds that there are certain incidental conditions which, if not provided for, may interrupt this process, and cause failure even when the main condition of exclusion of the air has been observed. In this point of view the behaviour of the *fluids* of the economy is of importance. Some of these, as *arterial* blood, are *organizable*, and while a moderate quantity effused between the lips of the wound acts as an important element of their junction, even large quantities thrown out under the skin are absorbed with great rapidity. Other fluids, as *venous* blood, are *inorganizable*, and while portions of that effused may be resorbed, the remainder continues to offer a mechanical obstacle to immediate organization. Then, there are excreted fluids, such as bile, urine, and pus, which are *antipathetic* to immediate organization. Pus, confined under the skin, may either undergo chemical change, or retain its normal characters. In the former case, the smallest portion will immediately excite reaction, and in the other gives rise, by inoculation, to the secondary formation of small cold abscesses.

The cicatricial tissue resulting from the healing of ordinary

wounds bears no resemblance to any of the normal tissues, and constitutes a functional interruption in the organs in which it is deposited. In the immediate organization which takes place after subcutaneous wounds, all divided tissues are susceptible of producing their like at the cut surfaces, muscle, muscle, nerve, nerve, and so on, each endowed with its proper power. When, however from the effusion of too much blood by surrounding vessels, the divided surfaces are kept too far separated, and the proper blastema is not exuded, functional interruption ensues here also, the extremities of the cut tissues becoming atrophied and losing their specific organization. This is the case with muscle, tendon, nerve, &c., but in none so obviously as with arteries, which are sometimes converted into fibrous cords for the whole length of the limb, contrasting with the integrity of their calibre when the contiguity of the divided surfaces has been maintained. The lameness which has often resulted from section of the tendo-Achillis, and the loss of motion of the fingers almost always produced by a division of the flexor tendons, are dependent upon the production of heteromorphous tissue consequent upon the non-observance of some of the conditions necessary for immediate organization. So, too, in the operation of strabismus, the functions of the muscles, when divided in an exposed state, are more or less impaired.

2. *Surgical Applications.*—Although tendons had already been divided by operations somewhat analogous to those of M. Guérin, this was an empirical procedure only, having at most the object in view of limiting the amount of resulting inflammation. M. Guérin claims to have raised these subcutaneous operations into a method, based upon principles deduced from the teachings of experiment, and clinical and pathological observation. The *object* of this method is not to merely limit the amount of suppurative inflammation, but to absolutely prevent it, and to secure immediate organization by homogeneous tissue. The *means* of effecting this are comprised in four principal rules:—1. Make the wound in the skin at the greatest possible distance from that of the tissue to be divided, so that the track joining the two may be sinuous; 2. Circumscribe the section to the tissues to be divided, isolating them from surrounding parts by tension, contraction, &c.; 3. Prevent the effusion of inorganic or antipathetic fluids into the wound, and expel all such, as well as air, from its track after the operation; 4. Close the lips of the external wound securely by adhesive plaster. The *results*, when the condition of the operation are observed, are so satisfactory, that M. Guérin declares that in many more than 2000 cases, he has never met with a suppurating subcutaneous wound. In conclusion, he gives a summary of the various applications he has made of this method.

(A.) *Subcutaneous Sections*:—1. *Of the skin and cellular substance.*—In five instances, M. Guérin has detached bridges of cellular tissue, which by displacing the skin, or causing its adhesion, have

produced grievous deformities of the face or neck. 2. *Tendons*.—These operations are now so common as to call for no remark, further than indicating the superiority of the results attained compared with those of ordinary tenotomy. 3. *Aponeuroses*.—Besides the section of these as an orthopædic procedure, M. Guérin has resorted to it with success in *débridement* in inflammatory tumefaction. One of the most original applications of subcutaneous tenotomy was its employment in old and congenital dislocations, and the success that attended this practice has led to its adoption in aid of the reduction of recent fractures and dislocations. 4. *Muscles*.—The largest as well as the smallest muscles of the body have now been divided, some of the operations involving large muscular masses. Among the most important may be mentioned those applied to spinal curvature, congenital luxation of the femur and strabismus. In one case, reported to the Académie, M. Guérin divided forty-two muscles and tendons, for general deformity of the articulations, at a single sitting, no suppuration or fever resulting. Myotomy has also been applied to the *radical cure of reducible hernia*, and for *débridement in strangulated hernia*. In the first of these, the entire thickness of the muscles and aponeuroses constituting the canal is traversed in various directions, the resulting exudation proving an effectual obturator, as witnessed in several of the author's eleven cases. 5. *Ligaments*.—The section of these in such deformities as resist the mere division of tendons and muscles has now been performed times out of number. 6. *Vessels*.—In several instances, subcutaneous incision and scarification have converted vascular tumours into cicatricial tissue, and that without producing the suppuration consequent on ligatures; and various subcutaneous operations have been performed on the veins. 7. *Nerves* have been thus divided in neuralgia with advantage. 8. *Cartilages*.—M. Guérin states as a fact—of which we have met with, however, no confirmation elsewhere—that subcutaneous section of the symphysis pubis, for facilitating labour, is of common occurrence in France. 9. *Bones*.—Among these we have the subcutaneous ablation of painful exostoses, and the fracture of rickety bones in order to rectify their curvatures. M. Guérin has shown that in such curvatures the old bone is reduced to lamellæ, which are lost in bone of new formation. At the second stage of the disease, the latter is spongy and flexible, and if we make an incision half through the arch of an angular curvature, a deformity that threatened to become permanent may be at once removed.

(B.) *Punctures and Extractions*.—Under this head M. Guérin refers to three of the applications, as indicative of surgical progress: 1. The opening of large *congestive abscesses*.—So great is the danger attendant upon this, performed in the usual modes, that we have no example on record of success; the opening in cases where recovery occurred, having taken place spontaneously, the



pus gaining issue through a sinuous track at a distance from the seat of collection. It is by imitating and generalizing this process of nature that the subcutaneous mode has been enabled to convert recovery into the rule and death into the exception. 2. *Thoracentesis*.—In a recent memoir, M. Guérin detailed 30 cases of this operation, deducing from them the conclusion, that the operation is devoid of all danger, and cures whenever serious complications do not exist. 3. The *extraction of foreign bodies* has been repeatedly performed with success.

(C.) Intermediate between the other two is another category of applications, comprising: 1. The *abortion of imminent phlegmon*.—M. Guérin believes that all phlegmon commences by a nucleus, a thorn as it were, in the cellular tissue, and has found, if this be divided by the subcutaneous incision, no suppuration will ensue, though the phlegmon may have reached a considerable size. 2. He has effected the *destruction of painful cervical glands* in four instances, by fixing the gland and dividing it in various directions, thus separating it from the surrounding vessels and nerves. It becomes converted into an insensible, amorphous, cicatricial tissue, which is afterwards resorbed. 3. The destruction of *painful tumours*, forming in the substance of muscles.—Under this head, too, may be noticed the section of fatty and other encysted tumours (*loupes*). Trifling as the operation is, when performed in the ordinary way, ablation has not infrequently led to fatal results.

[*Gazette Médicale. Ib.*

*Illustrations of the Influence of Pregnancy in controlling or retarding the Development of certain Diseases.\** By W. F. MONTGOMERY, M. D., Professor of Midwifery to the King and Queen's College of Physicians.

On a former occasion, when treating of the condition of pregnancy, I took occasion to remark that it appeared from experience, that women who bear children generally enjoy more even health and are less disposed to disease than those who lead a life of celibacy, or who, having married, remained unfruitful; so that Gardien seems to express no more than the truth when he says, “Dès qu’une femme est grosse les probabilités de sa vie augmentent;” and this is what we ought, *à priori*, to expect, because, childbearing being the ordinance of an allwise Providence, we should anticipate that the fulfilment of the duty thus ordained would conduce to the welfare of those on whom it has been devolved.

It seems in conformity with such a view to believe, what indeed, I think, experience has taught us, that pregnancy acts in a great degree as a protection against the reception of disease, and perhaps on the common principle, that during the continuance of one very active operation in the system, it is thereby rendered less liable to

\* Read before the Association of the College of Physicians of Ireland.

be invaded or acted on by another; thus it has been observed, that during epidemics of contagious diseases of different kinds, a much smaller proportion of pregnant women have been attacked than of others: but when attacked, they suffer severely; thus, when the cholera visited this country, the proportion of pregnant women who took the disease was very small, but all who caught it died, I believe, without almost a single exception. Gardien's experience led him to a similar conclusion, he says: "*Les femmes enceintes sont moins exposees a gagner les maladies contagieuses; mais lorsqu'elles en sont atteintes, elles succombent plus promptement.*" I think also I have seen sufficient to satisfy me that pregnancy does, at least occasionally, exercise another kind of influence over disease in the system, namely, of preventing its development during that state, although the infection may have been caught; as is proved by the disease showing itself immediately after delivery, as in the following cases:

Mrs. W., when in the ninth month of pregnancy, was much about her brother, who was dangerously ill of malignant scarlatina; she seemed to have escaped the danger completely, but the day after her delivery she was covered with the disease, of which she died in a few days; between the time of her exposure to the infection and her delivery, there had intervened three weeks, during which she appeared to be quite well.

When Mrs. F. was in the eighth month of pregnancy, her husband had typhus fever, in which she assiduously attended him; after his recovery, she went to her father's house, some fifty miles from town, where she was delivered in due time, and immediately afterwards was seized with typhus fever, of which she died in eight days; between five and six weeks had elapsed between Mr. F.'s illness and her labor, and during that interval, she seemed in perfect health.

In the month of November, 1854, I attended a young lady in her first confinement; previous to which she had both the lower extremities much enlarged by anasarca, but she appeared, in other respects, quite well, with one exception, which was that she had such *soreness* of the abdomen, she found a difficulty in laying on either side: and when I passed my hand over the abdomen, she complained that the pressure hurt her everywhere.

On the 12th she was confined, after a favorable labor, but the abdominal tenderness remained, and there was a peculiar doughy feel of the whole abdomen; next day, this was equally felt, but with little or no pain or fever, and a perfectly quiet pulse.

On the 14th, I found the insteps of both feet, but particularly the left, covered with well-developed erysipelas; her mother, who seemed very anxious about her, was present when I examined the feet, and on our reaching the drawing-room said, "Doctor, isn't that very like erysipelas?" I said, "Yes, certainly, there was no doubt about it." "Dear me, sir, do you think she could have

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taken it from her husband?" She then, for the first time, informed me, that some weeks before leaving home, to come to town for her confinement, her husband had a severe attack of erysipelas, during which she had assiduously nurse-tended him. Immediately on the appearance of the erysipelas on the feet, the abdominal symptoms began to decline, and after two or three days, ceased to exist. I cannot but believe that this lady caught the infection from her husband during her close attendance on him, that it remained in abeyance until gestation was over, and was then developed. She recovered well.

It is, I believe, a matter of common observation, that when women who have been laboring under certain forms of disease happen to conceive, the morbid affection previously existing is oftentimes either greatly mitigated, checked, or even altogether suspended for a time, as has been frequently observed in persons affected with phthisis; though I must add that the influence of pregnancy in cases of phthisis is a question on which a variety of discordant opinions has been given by high authorities. Andral's conclusion, from his latest observations, is, "that in the great majority of cases the symptoms of phthisis are suspended, or at least remain stationary during the course of pregnancy." Louis says he is not "in a condition to determine whether pregnancy is, or is not capable of retarding the progress of phthisis," but he suggests that the fact might be, that several of the symptoms become somewhat more obscure during pregnancy, without any check being in reality given to the advance of the disease. My own experience would lead me to the conclusion, that if a woman predisposed to phthisis, but in whom the disease has not actually become developed, prove pregnant, she is likely to be benefited thereby; and I think I have seen life thus prolonged, for years, in several instances; but, on the other hand, if pregnancy takes place in a woman already actually in consumption, or if this disease supervene on pregnancy, the fatal issue is as likely to be accelerated as postponed, or, perhaps even more so.—[*Dublin Quarterly Jour. Med. Sci.*]

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*Treatment of Chronic Entropium by Collodion.*—Mr. Wm. Batten reports in a late number of the *Lancet*, two obstinate cases of entropium, both of which had resisted a great variety of treatment, but which were cured by the application of collodion to the skin of the eyelid, previously corrugated by the thumb and finger. Several layers are successively applied and allowed to dry before the fingers are removed. The application is made at first every other day, and afterwards at longer intervals.—[*Boston Medical and Surg. Journal.*]



## EDITORIAL AND MISCELLANEOUS.

*The Bearded Woman and Child.*—We have recently had an opportunity of seeing these interesting freaks of nature, during their sojourn in this city. Mrs. Clofullia, the person in question, was born in Switzerland, in 1829, and is, therefore, now about seven and twenty years of age. We are informed, by the printed narrative of her life, that her parents presented nothing peculiar in their appearance, and that her father had rather a scanty beard; but that her maternal grandfather had a very strong beard, and was quite hairy; that she was observed, soon after her birth, to have the body and face covered with a down; that this gradually increased, so that her beard was two inches long at eight years of age; and that at the age of fourteen it had attained its present length of about five inches. She is of ordinary stature, rather stoutly built, has a masculine face, (said to be very much like that of her grandfather) a well formed female chest, large mammæ, and feminine shoulders and arms covered with as much hair as seen in strongly bearded men. Her beard is fine and soft, though very abundant, extending from the ears and the malar bones, over the whole of the lower jaw down to the neck, as in man, but the upper lip presents only a downy appearance, such as is occasionally met with in brunettes. In short, with the exception of the upper lip, she has as strong a beard as we usually see in man. Married early in 1851, she gave birth in December of the same year to a daughter, in England, as is attested by Hy. Thos. Cornelius, M.R.C.S., who attended her in her confinement. This child is said to have died, during the process of dentition, but to have been very handsome, and to have had no more hair than ordinary children. Her second child is attested by C. H. Dean and J. B. Evans, surgeons of Oxford, England, her accoucheurs, to have been born in December, 1852, and is the one who now accompanies her, under the name of Albert Esau. He is quite a sprightly boy, (now three years of age,) with a coat of hair over the body and limbs, especially over the shoulders and back, and a beard about an inch in length covering the face, as described in the case of his mother, whom he strongly resembles.

During a judicial investigation in New York, provoked by a person who alleged that he had been cheated out of his fee of admission to Barnum's museum, inasmuch as he believed the bearded woman to be a man in disguise, Mrs. C. was examined by Drs. Valentine Mott, John W. Francis, and Alex. B. Mott, who certify that she is a well formed female.

Mrs. C. and her child are unquestionably genuine and most interesting specimens of anomalous hirsute development, and this is our apology for placing their history upon record.

## BIBLIOGRAPHICAL.

*A Treatise on Medical Jurisprudence.* By FRANCIS WHARTON, author of "A Treatise on American Criminal Law," "Precedents of Indictments," "American Law of Homicide, &c., and MORETON STILLE, M. D., Lecturer on the Principles and Practice of Medicine in the Philadelphia Association for Medical Instruction. Philadelphia: Kay & Brother. 1855. 8vo., pp. 815. (For sale by T. Richards & Son.)

The growing appreciation, by both the Medical and Legal Professions of our country, of the importance of correct information upon the subject matter of the volume before us, will secure for this work a ready sale, especially when its intrinsic merits are made known. It is the production of the joint labor of able members of the professions of Law and Physic, who have, each in his own sphere, brought together a sum of information not to be expected in the work of any individual of either of the learned bodies.

This treatise is divided into six books: the 1st, on "Mental unsoundness;" the 2d, on "Questions relative to the Fœtus and new-born child;" the 3d, on "Questions arising out of the difference of sex;" the 4th, on "Questions relative to Identity;" the 5th, on "Questions relative to the causes of death;" and the 6th, on the "Legal relations of Homicide, Fœticide, and Infanticide." These subjects are all treated elaborately, ably and perspicuously.

*An Introduction to Practical Pharmacy: designed as a Text-book for the Student, and as a guide to the Physician and Pharmaceutist—with many formulas and prescriptions.* By EDWARD PARISH, Graduate in Pharmacy, &c., &c., with 243 illustrations. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 544. (For sale by T. Richards & Son.)

This is altogether one of the most useful books we have seen. It is just what we have long felt to be needed by apothecaries, students, and practitioners of medicine, most of whom in this country have to put up their own prescriptions. It bears upon every page the impress of practical knowledge conveyed in a plain common-sense manner, and adapted to the comprehension of all who may read it. No detail has been omitted, however trivial it may seem, although really important to the dispenser of medicine.

*On Bandaging, and other operations of Minor Surgery.* By F. W. SARGENT, M. D., &c., &c., new edition, revised and enlarged, with 181 illustrations. Philadelphia: Blanchard & Lea. 1856. 12mo., pp. 360. (For sale by T. Richards & Son.)

This is a popular little work upon an interesting subject to young practitioners. This improved edition will therefore be welcome to those who may be in need of something of the kind.

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*The Transactions of the American Medical Association.* Vol. VIII. Philadelphia: T. K. & G. P. Collins. 1855. 8vo., pp. 763.

This work has been some time on hand, but has not been noticed earlier from unavoidable circumstances; and we even now regret that we have not as much space to devote to it as we would like. It contains, besides the minutes of proceedings, and the address of Dr. Pope, President of the Association, a Report on the diseases of Missouri and Iowa, by Thos. Reyburn, M. D.; the Report of the Committee on the Hygrometrical state of the atmosphere in various localities, and its influence on Health, by Sandford B. Hunt, M. D.; a paper on Deformities and Fractures, by Frank H. Hamilton, M. D.; a Report on the diet of the sick, by Charles Hooker, M. D.; an Essay on the Pathology and Treatment of Scrofula, by W. H. Byford, M. D.; a Report on the means of preserving Milk, and on the influence of Pregnancy and Menstruation on the composition and nutritive qualities of that fluid, by N. S. Davis, M. D.; the Report of the Committee on Dysentery; an article on the effects of Alcoholic liquors in Health and Disease, by R. D. Mussey, M. D.; a sketch of the Caustic pulverizer, by R. H. Thomas, M. D.; and the Prize Essay, by J. D. Trask, M. D., on the Statistics of Placenta Prævia. Several of these papers are highly valuable contributions to practical knowledge, and are of themselves worth the price of the volume.

*The Mortality Statistics of the Seventh Census of the United States.* 1850. Embracing—1. The cause of Death; 2. The age and sex; 3. The color and condition; 4. The Nativity; 5. The season of Decease; 6. The duration of Illness; 7. The occupation of the persons reported to have died in the twelve months preceding the first of June of that year—with sundry comparative and illustrative tables. By J. D. B. DE BOW, Superintendent of United States Census. Washington: 1855. 8vo., pp. 305. Published by order of Congress.

The magnitude and importance of this work may be estimated partially by the extracts we have reproduced from the proof-sheets kindly sent us in advance by the able and indefatigable superintendent of the census.

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*Mortality Statistics of the Seventh Census.*—We are indebted to Mr. DE BOW, Superintendent of Census, for the proof-sheets of the "Mortality Statistics of the seventh census," so far as they relate to Georgia. This census was taken in 1850, and shows the population of Georgia to have been at that time 906,185, of whom 521,572 were white, 381,682 slaves, and 2931 free colored. The mortuary statistics for the year 1850 are made out separately for the northern, southern, and middle sections of the State, and are also represented in the aggregate. This last classification we reproduce below. Admitting it to be as correct as such documents can usually be made, it reveals some interesting facts. The whole number of deaths for the year



was 9925, or about one per cent. of the population. The mortality among the whites was 4580, that of the slaves 5304, and that of the free colored 41—showing a much greater ratio of deaths among the colored than the whites. This is in accordance with the well established fact that in all countries the laboring classes suffer greater mortality than others.

A reference to these tables shows that the mortality from affections of the *Respiratory apparatus* (comprehended under the heads of asthma, bronchitis, catarrh, consumption, croup, hooping-cough, influenza, lung disease, pleurisy and pneumonia,) was 1986, of whom 831 were white, and 1155 colored. The negro would, therefore, seem to be much more susceptible to pulmonary diseases than the white, unless this difference be attributed to the relative degree of exposure of the two races. Upon examining into the mortality from the *fevers* usually termed malarial, (enumerated as bilious, brain, congestive, inflammatory, intermittent, and remittent,) we find that the number of deaths was 933, of whom 490 were white, and 443 colored, thus revealing also a greater liability of the black than of the white to this class of affections, for these numbers, when viewed in connexion with the relative numbers of each color as indicated by the census, will make one death per 1064½ whites, and one per 861½ blacks. The deaths from *typhus* (typhoid?) fever were 287 whites and 270 colored. While *tetanus* proved fatal to but one white, it carried off 23 blacks; whereas, *cancer* destroyed 44 whites and only 16 blacks. *Convulsions* were fatal to 132 whites and 54 blacks. *Scarlatina* killed 109 whites and 202 colored.

In a moral point of view, these statistics are truly startling. We find 12 suicides among the whites, and only two among those whom fanatical philanthropists would suppose most dissatisfied with life. Of homicides, (shot, killed, murdered, and poisoned) there are no less than 70 during the year! 40 whites and 30 blacks. Executed, one white and one black.

These documents sustain the general impression that the African lives longer than the Caucasian race, 100 whites and 148 blacks being reported as having died of old age. Although we do not mean to deny the correctness of the received opinion, we yet believe that it is exaggerated. Age has advantages to the negro which are not experienced by the whites, and its immunities are generally claimed by the slave long before his master would think of resting from *his* labors. Hence it is, that very many of our slaves, when sixty years of age, imagine and declare that they are eighty or ninety, and are accordingly indulged with an exemption from farther compulsory labor. Many of the citizens of this place may recollect "old daddy Quah," who averred, apparently in good faith, that he was so old that when he arrived here from Africa, the Savannah river was so small a stream that he could "step over it!" He thought himself 150 years of age, but was probably not more than 95 when he died.

*Fallopian and Uterine Pregnancy simultaneously.*—The Boston Medical and Surgical Journal reports that Dr. Buck, of Manchester, N. H., sent to Dr. H. J. Bigelow, who presented them to the Boston Society for Medical Improvement, the specimens referred to in the following account :

“The patient was a married woman, about 25 years of age, and was attacked suddenly with pain in the abdomen at 9 P.M. on the 17th ult., from which time she sank rapidly and died in about seven hours. Before her death she told her attending physician, Dr. Tebbets, that she was pregnant and had taken a medicine to procure abortion ; and that she had, further, had an operation performed in Boston for the same purpose.

“Dr. B., having been summoned by the coroner to make a *post-mortem* examination, introduced a speculum, but found no appearance of injury about the os uteri ; the os and the lining membrane of the vagina being perfectly blanched. The peritoneal cavity contained six or eight pints of blood, partly fluid and partly coagulated. The uterus was enlarged to twice its usual size ; and, upon laying it open, after its removal from the body, there was found in its cavity an ovum, the fœtus being about three inches in length, and in every way well developed externally for one of that size, as were the membranes. The right Fallopian tube was abruptly distended towards its distal extremity, so as to form a solid tumor of the size of an English walnut, upon the surface of which was the orifice from which the blood had escaped into the peritoneal cavity. Upon incision of the tumor there was found a second ovum ; the fœtus, however, being less developed than the one contained in the uterine cavity. The right ovary contained two well-marked corpora lutea, there being nothing remarkable in the left.

“The uterus, which was sent to Dr. B. without the fœtuses, had been preserved in spirits, but showed several of the points above described perfectly well ; the deciduary portion of the inner surface of the fundus and body of the uterus being thick and well characterised. The case, which was unique, as far as any one present was aware, seemed to be regarded as one of twins, in which one of the ova was accidentally arrested in the Fallopian tube.”

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*The Cincinnati Medical Observer.*—We have received the first number of this new periodical, published monthly, under the Editorial supervision of Professors G. Mendenhall and John A. Murphy, of the Miami Medical College, and E. B. Stevens, M. D. We cheerfully add it to the list of our exchanges, with our best wishes for its success.

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A large lot of pamphlets has accumulated upon our table, which we regret not being able to notice according to their merits. Among them we should, however, mention the following :

Transactions of the Medical Society of the State of Pennsylvania, at its annual session, held at Holidaysburg, May, 1855.

Transactions of the State Medical Society of the State of New York. Transmitted to the Legislature February 13, 1855.

The Transactions of the New-Hampshire Medical Society, (sixty-fourth anniversary,) held at Concord June 6th and 7th, 1854.

Twelfth Annual Report of the Managers of the State Lunatic Asylum. Transmitted to the Legislature, Jan. 17, 1855.

Report of the Pennsylvania Hospital for the Insane for the year 1854. By Thomas S. Kirkbride, M. D., Physician to the Institution.

Reports of the Trustees and Superintendent of the Butler Hospital for the Insane, presented to the Corporation at their annual meeting, January 24, 1855.

Nineteenth Annual Report of the Managers of the New York Institution for the Blind, to the Legislature of the State: made in conformity to law, January, 1855, for the preceding year.

Annual Report of the City Inspector of the City of New York, for the year ending December 31st, 1854.

Discovery of the cause, nature, cure and prevention of Epidemic Cholera. By M. L. Knapp, M. D., &c., &c.

Essay on Cholera Infantum. By M. L. Knapp, M. D., &c., &c.

A Brief History of the Origin, Progress and Extension of the Epidemic Yellow Fever, in Memphis, Tenn., in 1855; with some account of its Symptoms, Character, Treatment and Fatality. By L. Shanks, M. D., Prof. of Obstetrics, &c.

New means for making Extension and Counter-Extension in Fractures of the Leg and Thigh. By John Neill, M. D., &c.

Correction of the Erroneous Statements of Henry H. Smith, M. D., published in the Medical Examiner, January, 1855, in relation to a case of Gastrotomy, which occurred in the practice of Washington L. Atlee, M. D.

Reply of J. C. Hughes, M. D., Dean of the Medical Department of the Iowa State University, to a certain document published by John F. Sanford.

On the cheaper Alkaloids of the Cinchonas. By Powers & Weightman.

Report of the Committee on the Hygrometrical state of the Atmosphere in various localities, and its Influence on Health. By Sanford B. Hunt, M. D., Buffalo, New York.

Surgeons' Splints and Improved Apparatus for Fractures. By Benjamin Welch, M. D. New York.

Archives de Physiologie de Thérapeutique et D'Hygiène sous la direction de M. Bouchardat, Professor d'hygiène à la Faculté de Médecine de Paris.

An Address delivered at the Laying of the Corner Stone of the Atlanta Medical College, July 21, 1855. By Henry D. Beman, Esq.

Address delivered at a Supper given by the Faculty to the Students of the Atlanta Medical College, on the 13th of August, 1855. By N. J. Hammond, Esq.

Introductory Address, delivered at the College of Physicians and Surgeons, New York, October 16, 1855. By John C. Dalton, Jr., M. D., Prof. of Physiology and Microscopic Anatomy.

Introductory Lecture to the Course on the Principles and Practice of Surgery, delivered in the University of Pennsylvania, October 9, 1855. By Henry H. Smith, M. D., Professor of Surgery.

Introductory Address, delivered to the Class in the Medical Department of the Iowa State University, at the opening of the Course of 1855-6. By Jno. R. Allen, M. D., Professor of Obstetrics and Diseases of Women and Children.



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## ORIGINAL AND ECLECTIC.

### ARTICLE VII.

*Remarks on the Diagnosis of Dislocations of the Shoulder Joint.*  
By L. A. DUGAS, M. D., &c.

The very frequent instances of permanent disability and deformity consequent upon the non-detection of dislocations of the Humerus, abundantly demonstrate the difficulty of their diagnosis, and would seem to demand at the hands of the profession a more careful study of the subject. The object of this paper is therefore to refresh the memory of those who will be more likely to read a periodical than to go back to their systematic treatises, and at the same time to suggest a means of diagnosis not referred to in works on Surgery, so far as my recollection serves me.

I will not stop to notice the various classifications proposed by authors, especially the French and Germans, who have perhaps multiplied varieties unnecessarily; but at once adopt that commonly admitted in this country. The head of the humerus may then be dislocated downward, into the axilla; forward, below the clavicle; and backward, upon the scapula. By far the most common of these accidents, is that in which the head of the bone is found in the axilla; whilst that in which the head of the humerus rests upon the scapula is so exceedingly rare that many experienced surgeons have never seen a case of the kind. The reason of this relative difference is easily ascertained by reference to the anatomical arrangement of the parts; for although the so-called *glenoid cavity*

is in reality almost a *plane* surface, which could of itself offer no impediment to dislocations in any direction, the head of the humerus is effectually prevented from escaping in certain directions by the strong arch which overhangs the articular surface of the scapula. This arch is formed by the acromion and coracoid processes and the intervening ligaments, fortified by the capsular ligament and the deltoid muscle. Now, while the anterior margin of this arch, formed by the coracoid process, does not descend below the upper fourth of the glenoid cavity, its posterior margin, consisting of the root of the acromion, comes down sufficiently low to protect almost, if not quite, one half of the articular surface. The only space left, therefore, by which the humerus could escape backward, is that which intervenes between the acromion and the attachment of the great and strong tendon of the triceps extensor cubiti, which space is very small when compared with that between this tendon and the coracoid process. Hence the variety of one accident and the frequency of the other.

But, to return to our immediate subject, the first consideration should be, not the signs or symptoms by which we may discriminate between the different dislocations of the shoulder, but rather the means by which we may determine whether there is any dislocation at all, or not. It is self-evident that if it can be ascertained that the head of the humerus is not in the glenoid cavity, it is displaced, or, in another word, *dislocated*. This fact can *usually* be determined by the depression observable below the end of the acromion process and beneath the deltoid muscle, both by the eye and by the hand pressed upon the shoulder. But there are many cases in which the fleshiness of the patient, or the tumefaction consequent upon the injury, are such as to render this element of diagnosis of little value, especially when we recollect that more or less depression would attend a fracture of the humerus near its head, and even a fracture of the neck of the scapula. Such a degree of depression as we might by careful examination detect in a fleshy person, or when there is much swelling, would therefore scarcely be deemed sufficiently positive in itself for practical purposes. It would become necessary to determine whether or not this depended upon the existence of a fracture. This might be done by endeavoring to produce crepitus, and by looking for the head of the bone in the localities in which it might be carried by dislocation. The sensation of crepitus and the absence of the

head of the humerus from the axilla, from below the clavicle and from the dorsum of the scapula, would establish conclusively that the cause of the depression observed, is to be found in a fracture; whereas the detection of the head of the humerus in any other place than in the glenoid cavity would establish the existence of a dislocation as the cause of the depression in question.

Again: the existence of dislocation may be sometimes determined by the detection of the head of the os humeri in an abnormal situation; and this would be conclusive without reference to any depression below the acromion. But there are individuals whose embonpoint or whose muscular development is such as to render this detection extremely difficult. Moreover, a fracture near the head of the humerus might be attended with such a displacement of the upper end of the lower fragment as to allow this to be taken for the head of the bone in the axilla, especially in individuals presenting the peculiarities just mentioned, or in cases attended with much swelling. It should be remembered that the head of the humerus becomes more prominent and may be felt in the axilla when the elbow is elevated, although it may have escaped detection while the arm was allowed to hang down.

It is needless to dwell upon the value of the information to be derived from the history of the accident, of the degree or kind of disability experienced by the patient, of the change in the length of the arm and direction of the shaft of the bone, of the pain induced by carrying the elbow in different directions, &c. All these circumstances should of course be studied by the surgeon in doubtful cases; but neither of them can lead to anything positive.

From these reflexions the necessary inference must be drawn that a concurrence of circumstances can alone be relied upon in certain cases to make the diagnosis of dislocation clear and positive. The discovery, then, of some one, unequivocal, pathognomonic fact, or sign, by which a dislocation of this joint could in all cases be readily ascertained, must be a great desideratum. I believe that this will be found in the following maxim: if the fingers of the injured limb can be placed (by the patient or the surgeon) upon the sound shoulder while the elbow touches the thorax, there can be no dislocation; and if this *cannot* be done, there *must* be a dislocation. I am aware that most writers indicate the difficulty of bringing the elbow in contact with the thorax as a symptom more or less marked in the several dislocations of the humerus,



but it is obvious that they do not assign to it the degree of importance to which it is entitled when coupled with the injunction to place the fingers upon the opposite shoulder, as just enunciated. Indeed, most authorities merely mention the fact that the elbow cannot be approximated to the trunk *without pain*. I insist that the elbow cannot be brought against the thorax when carried sufficiently in front to allow the fingers to rest upon the sound shoulder, either by the patient or by the surgeon, not because this would be painful, but because it is physically impossible without a reduction of the dislocation or such a disruption of the shoulder as no one would think of attempting. This becomes at once manifest by looking to the skeleton. With this before us, let us place the head of the humerus in the axillary region, and we observe that the elbow is at once thrown out from the trunk; that if we attempt to bring it towards the sternum the upper portion of the shaft of the humerus will soon encounter the ribs, and that the rotundity of the thorax will effectually prevent any contact between the elbow and sternum, unless, by using the humerus as a lever, we rend asunder all the obstacles in the way of the rising of the head of this bone. Our maxim then holds good with regard to dislocations into the axilla. Let us now place the head of the humerus where it would be found in a forward dislocation; that is to say, below the clavicle. We will then perceive that the elbow is still removed from the trunk, and that it is moreover directed backward, thus presenting, perhaps even to a greater degree, all the difficulties just specified, if it be endeavored to carry the elbow against the sternum and the fingers upon the other shoulder. With regard to the dislocation backward, the impossibility of bringing the elbow and fingers in the positions indicated, becomes so manifest that it requires no comment.

Now, can any other accident than a dislocation offer these obstacles to placing the elbow and fingers in the above-mentioned position? I unhesitatingly answer, there is none. It is true, that a severe contusion may render this or any other motion more or less painful to the patient, and that he will aver that he cannot do as directed. But the surgeon will find no difficulty in accomplishing his design, especially if he proceed gently, so as not to encounter any muscular resistance, voluntary or otherwise. The same remarks apply with equal force to fractures of the upper end of the humerus or of the neck of the scapula. In all these cases

the administration of an anæsthetic will save the patient some pain and facilitate the examination.

If, then, a dislocation of the humerus in any direction, whatever, renders it impossible to place the fingers and elbow simultaneously in the position stated, and that no other accident can produce this inability, the corollary is clearly that such an impossibility is pathognomonic of dislocation of the humerus; and, conversely, that the absence of this inability as clearly demonstrates the absence of dislocation.

Having in this manner settled the all-important question of the existence or non-existence of dislocation, it will not be found very difficult to determine the new position assumed by the dislocated head of the humerus. Indeed the mere direction of the axis of the humerus will suffice in most instances to lead us directly to its head. This axis can be usually traced without difficulty, with the fingers, from the elbow up to at least six or eight inches; a length sufficient to allow the imagination to prolong it to the upper end, if the tumefaction or other conditions should prevent more effectual means from being used. A straight rod placed over that portion of the axis which can be felt, would assist the determination of its extension, and this would lead either to the axilla, the acromial portion of the clavicle, or the dorsum of the scapula, according to the variety of the dislocation.

The next step should be to endeavor to *feel* the head itself, as distinctly as may be, for there can be no harm in multiplying our resources, and it is important that the new position of the bone be accurately determined. As already intimated, the head of the bone can be more distinctly felt in the axilla when the arm is elevated than when otherwise. If it be below the clavicle, it will be made more prominent by carrying the elbow forcibly backward; and, finally, if dislocated upon the scapula the elbow should, on the contrary, be forcibly carried forward, in order to increase the prominence of the head of the humerus.

I have thus endeavored to direct attention to what I deem an exceedingly important addition to our means of diagnosing dislocations of the shoulder, and have done so as briefly as the nature of the subject would permit. I may have erred in claiming for my views any originality, for the "wise man" has long since said that "there is nothing new under the sun," and daily experience confirms the correctness of the apothegm. I have neither the

leisure nor the inclination to thumb the numerous tomes of Surgical literature for the purpose of settling this point. It is certain, however, that if the method of examination here recommended has ever been suggested before, it has not been insisted on by the systematic writers usually consulted by our practitioners. If I may, therefore, have simply revived and magnified the value of what was known before, so that the profession and humanity may derive any advantage from this paper, my object will have been attained.

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ARTICLE VIII.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.  
LETTER NO. 9.

MONTGOMERY, ALA., Feb. 7th, 1856.

*Messrs. Editors*—In accordance with the objects which I have in view, it is necessary that I should make a few remarks respecting the therapeutic properties of Quinine, and lest it should be inferred from what I have already said, that I have fostered some hostility or prejudice against it, I may be permitted to state, that I entered the profession about the time, or soon after its introduction into practice, and from that time to the present, have been one of the most uniform and consistent advocates for its use; and though I administered quinine more than twenty years ago, in as large doses as I have ever found it necessary to administer since, I can lay no claim to credit for the *progress* which its introduction into practice has made in the healing art, nor have I been able to keep pace with the rapid strides which the profession in the South have made in the uses of quinine for the last few years. For a great while, and long before the discovery of quinine, Peruvian bark was held in high esteem as a stimulant and tonic, by Sydenham, Darwin, Cullen, and others, not only for the cure of simple intermittent and remittent fevers, but was freely used and recommended by them for the treatment of other forms and low grades of fever, both idiopathic and symptomatic, with the view and for the purpose of sustaining or building up the sinking or exhausted energies of the system; and there is no evidence that I am aware of, which goes to show that they regarded it in any other light, or as possessing any other valuable therapeutic properties than that of stimulant and tonic. Since the discovery and introduction of



quinine into practice, it has acquired a much greater popularity, and a much more extended application to the cure of diseases than the bark ever possessed; and more recently still it has grown so rapidly into professional favor, as not only to have led to the rejection of other valuable remedies, but has in a measure endangered, for a time at least, its high reputation and its intrinsic usefulness, by its application to diseases and conditions to which it is not suited, and ascribing to it properties and virtues which it does not possess, or to say the least, which are extremely problematical; such, for instance, as its antiphlogistic and sedative properties, which are well calculated to lead to error in practice, as well as to bring the remedy into disrepute. Now, I do not feel inclined at this time to enter into an argument with the ultra quininists upon these points; but, as their testimony tends most decidedly to establish the truth of one of my first and most important propositions with respect to the character of the diseases of our climate and latitude, namely, that they are generally not only *periodic*, but that their general tendency is to debility, or depression and congestion, and requiring stimuli and tonics for their cure, I may be permitted to examine into and make a few remarks respecting these alledged properties of quinine.

Well, we have it upon very good authority, that large doses of quinine will give a *dog fits*, and evidence is not wanting to prove that it will serve a man in the same way; but that does not prove that quinine is *sedative*, as I think I shall be able to show. Nor can it be received as a stronger argument against the proper use of quinine, than would be a like argument against the use of *puddings*, founded upon the popular belief, that "too much pudding will choke a dog." But as there are large numbers of the profession who contend for the sedative and antiphlogistic properties of quinine, and who persist in its use in *fitiferous* doses, it will not be amiss to enquire into the circumstances which have most probably led them to their conclusions, the chief of which, no doubt, has been from observing its beneficial effects in those diseases and constitutions of the system, for the cure of which the old writers spoken of recommended the free use of bark, under the belief of its stimulant and tonic properties; in which, however, *they may have been mistaken*.(?) Observing, I say, the beneficial effects of quinine in such affections as pneumonia, and other phlegmasiæ of the lower grades, bilious fevers, irritant and congesto-irritant fe-

vers, and other fevers of like pathological character and conditions, manifesting the signs of *excitement* and periodicity, and still *adhering* to the preconceived and firmly established belief of their *inflammatory* character, requiring sedative and antiphlogistic remedies for their cure, when they came to "change their method," it became necessary to "disabuse themselves" of an improper use of the lancet, purgatives and other sedatives and antiphlogistic remedies, or to accommodate and reconcile the therapeutic properties of the "*chemical*," to the existing character and condition of the disease, which many have yet failed to do. But how it happens that quinine being sedative and antiphlogistic (?) should prove to be so proper and valuable a remedy in those diseases and conditions, in the treatment of which, the lancet, purgatives, and other sedatives and antiphlogistics once held the lead, but which are now laid aside as improper, and even hurtful, I must leave to be answered by those who believe quinine to be sedative and antiphlogistic, or the diseases and conditions in which it is most valuable and proper, to be *inflammatory*, requiring such remedies. For my own part, I reached the *quinine platform* by a different route, by assuming that the diseases in question were *not* inflammatory and phlogistic in their character, and consequently the lancet, purgatives, &c., were *not* proper remedies for their cure, but that generally they manifested not only the signs of periodicity, but evidently the signs of debility and depression, requiring the use of stimuli and tonics, of which quinine *has been proven* to be the best of the class. But it matters little what road we may have traveled, since we find ourself at last upon the great platform, which it seems is large enough to accommodate all the world of doctors, if not the rest of mankind; for, walking down the street not long since, I met a gentleman who presented me for inspection, a box of pills, which he stated he had just obtained from a professed homœopathist. Curiosity prompted me to examine them, and on opening the box, I found it filled with 5 gr. *quinine boluses*. Well, I did not say so, but I thought that if our people had a right to steal their *thunder*, they had as good a right to steal ours.

But, to be serious in this matter, I really cannot perceive upon what good and sufficient grounds, the ultra quininists base their belief in the sedative and antiphlogistic properties of quinine. In all intermittent and remittent affections which are controlled by the laws which govern their type, each paroxysm consists of a pe-

riodic *fall* and *rise* of nervous excitement according to that type, with a corresponding *ebb* and *flow* in the circulatory system; and each paroxysm, of whatever type it may be, terminates within twenty-four hours from its beginning. Such appears to be the general law which governs all malarial and periodic diseases. This oscillatory state of the nervous system, and the corresponding ebb and flow in the vascular system, often constitutes the chief element of disease in simple intermittents, which being once interrupted, frequently puts a stop to their further progress; for this purpose, quinine is successfully used, not, however, with the view of *subduing excitement*, but for the purpose of *preventing depression*. Knowing the precise time at which the nervous depression, and the ebb in the circulation is to take place, from knowing the type of the disease, quinine is used for the purpose of raising a state of artificial excitement in substitution for the pathological state of depression and congestion. The excitement thus created continues until the time of its periodicity has gone by, and subsides with the stimulant effects of the quinine, while its tonic effects serve as a protection against depression at the period for the recurrence of the next paroxysm. If quinine will produce such results, where is the evidence of its sedative and antiphlogistic properties? Again: if quinine be administered in those forms and conditions of disease which I have already noticed as *irritant*, *congesto-inflammatory* and *congesto-irritant*, either with or without attending local inflammation, in which there is an evident "*want of innervation*," and in which there is an evidently diminished quantity of blood in the arterial vessels on account of the weakened and relaxed condition of the systemic capillaries, as manifested by a feeble and often exceedingly rapid or frequent pulse, and which condition has too often been the pretext for the use of sedatives and antiphlogistics, under the apprehension of the existence of inflammation. The effects of quinine in all such cases will be to *increase* the volume and strength, and *diminish* the rapidity or frequency of the pulse, whereas, in such conditions the direct effect of sedatives and antiphlogistic remedies, such as the lancet, purgatives, &c., is invariably to *diminish* the strength and volume and to *increase* the frequency of the pulse. Here then we observe, in juxta-position, the stimulant and tonic effects of quinine upon the general capillaries, whereby they are enabled to resist the too frequent transmission of blood through them, thus allow-



ing the arteries to become refilled, *increasing* the volume and *diminishing* the frequency of the pulse; while the effects of the lancet, purgatives, and other like remedies, tend still further to weaken and relax the capillaries, whereby the blood is allowed to escape more rapidly out of the arteries and thus the pulse becomes *diminished* in volume and *increased* in frequency. If such be the action or effects of these remedies, where is the evidence that quinine possesses sedative or antiphlogistic properties? Quinine may be, and often is administered with the happiest results in febrile affections with and without the existence of local inflammation, as pneumonia, bilious fever, &c., in which there is an evident preponderance of excitement. But it must be remembered that all such cases are amenable to the laws of *periodicity*, and few practitioners, I imagine, who profess to be governed in their practice by the rules of pathology, would venture upon the use of quinine in conditions of high nervous and vascular excitement or inflammation before *depletion*, unless they felt very *confident* of the approach of a period of remission, but upon that certainty, or expectation and belief, they are willing to run the risk of raising the excitement a few degrees in order to meet the approaching state of depression or the remission, with the tonic effects of the remedy. But it will not do to infer from the beneficial effects of quinine, in such cases, that it is either sedative or antiphlogistic, for the same general results will be obtained whether *local inflammation* does or does not exist, for quinine when used in such cases (pneumonia for instance) is not with reference to the inflammation in the lungs, but in reference to the character of the general febrile condition which accompanied it, *one* being amenable to the laws of periodicity, the *other* not so. And it must be remembered too, that while so *few* of our diseases of all descriptions are of such high inflammatory grade as to have lead to a general abandonment of the lancet, purgatives, and other sedative and antiphlogistic remedies, there are *as few* which do not admit of, and require the use of quinine for their cure.

There is a point in relation to inflammation upon which I desire to say a few words, in order to prevent any misunderstanding of my views upon the subject: Heretofore, I have spoken of inflammation rather incidentally than otherwise, and may have used too indiscriminately the terms inflammation and its correlative inflammatory; and what I now desire to say is, that I regard in-

flammation as always a local affection of greater or less extent, and going through a series of phenomena in such location, having (according to some of the best physiologists and pathologists whose views and opinions I am rather inclined to adopt,) as its proximate cause, first, a state of debility, second, a state of irritation, and third, a state of inflammation which often does, but by no means necessarily, bring the general system under its influence to an appreciable extent. The term inflammatory, as it has been used, does not necessarily imply the existence of inflammation, but is used to express a general condition of the system characterised by excitement and increased vascular action, sustained by general vigor and tonicity of the system. And just here we must look for the characteristic difference between inflammation and irritation, as local affections, and the inflammatory and irritant, as general conditions, to be found as hereafter explained, in the condition of the skin, and the state of the pulse. With these explanations, I will proceed.

Although I am a decided advocate of quinine, in *wholesome* doses, in malarial fevers generally, and other affections which fall under this influence and the laws of periodicity, I *cannot* subscribe to its use in those "pernicious" doses which *give dogs fits*, and render men blind, deaf and crazy. Nor can I yield my ready belief, (although the declaration comes to us from high authority,) that quinine possesses the property of "aborting" fevers of a different type, such, for instance, as yellow fever, and typhoid fever, as my own observation and experience in those diseases (though limited, it is true) serves to raise a doubt, whether the cases so "aborted" may not have been so invested with malarial and periodic influences, if not to obscure their essential typical character, to have at least brought them legitimately within the dominion, and under the control of quinine. And my limited observation has taught me to believe that the typhoid condition is, at best, but *indifferently* amenable to the action of quinine, and that the nearer such diseases approach their true and essential, typical or typhoid character, the less they become so. This opinion and belief is strengthened and sustained by the fact, that quinine exerts no evident chemical or therapeutic action upon the constitution of the blood and other circulating fluids, and that its action is very feeble, if indeed it has any at all, in promoting the important functions of secretion, excretion, absorption, nutrition, &c. In such a

view of the case, I cannot well conceive how physicians can rely with confidence of success upon the action of quinine in the treatment of yellow fever, and other fevers of like type, in which there is often not only an adynamic condition, but an evident depravity and vitiation of the circulating fluids, requiring not less the action of such remedies as promote the functions of secretion, and excretion, than those strictly dynamic in their character.

Of the "modus operandi" of quinine, as little is known, beyond its effects, little is required to be said. But assuming that stimuli are those substances which produce excitement and increased vascular action, by increasing the action of the heart and arteries, and the respiratory movements, such, for instance, as brandy, ether, ammonia, camphor, opium, &c., the slight and almost unappreciable effects of this kind, would lead us to infer that quinine is but slightly stimulant, and yet it has the power of creating and sustaining excitement, against the influences of depression, superior to all other stimulants, which leads us to the further inference that, while brandy, ether, &c., exert their influence upon the brain, and other great nervous centres, creating general excitement, and increasing the action of the heart and arteries, the action of quinine is directed to, and exerted upon, those nerves especially which control the general capillaries, where its stimulant and tonic properties are chiefly manifested, as already has been explained. I would not deny that an impression is made by quinine upon the nervous centres, and that it will, when first administered, increase to a slight degree the action of the heart and arteries; but I am by no means satisfied that the *pernicious* effects of quinine, which we sometimes hear of, depend upon its sedative properties, but that the more probable solution of the matter is, that these effects are properly ascribable to its stimulant and tonic effects, *in excess*, upon the capillaries, giving rise to *arterial plethora*, thus overwhelming the brain and other nervous centres, producing stupor and convulsions, and destroying the sense of hearing, seeing, &c.; or in less degree, giving rise to headache, dimness of vision, partial deafness, ringing in the ears, &c., producing a condition very similar, if not identical, with that which I described in my last letter, as "a condition of oppression" which may usually be relieved by bloodletting.

It was my intention to have taken a more extended view of this subject, but as it will necessarily come up again, in connec-



tion with the treatment of some of our most important diseases, according to the classification which I have made of them, I will dismiss the subject for the present, by saying, that one effect alone constitutes the basis upon which the deserved popularity of quinine rests, as a remedial agent, in the management of the diseases of our climate, which is, its unqualified, stimulant and tonic effect upon the nerves which control the capillary circulation, enabling them to resist the influence of periodic states of depression, and thus *prevent* the formation of congestion. It was my intention, also, to have given to Opium a separate consideration, but in consequence of its *diversified modes of action*, and its equally diversified applicability and suitableness to the perpetually changing conditions of the system, I have determined to consider it in connection with the treatment of diseases as just stated.

My next letter will be chiefly appropriated to a consideration of the uses and abuses of Calomel.

Yours, as ever,

SAML. D. HOLT.

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ARTICLE IX.

*Case of Peritonitis, terminating by the extension of Inflammation in Suppuration of the Testicles.* By C. M. RIVERS, M. D., of DeKalb County, Ga., formerly of Charleston, S. C.

While residing in Charleston, I was on the 17th August, '55, called to see a patient a few miles from the city. On my arrival, I found him suffering with an enormous Scrotal Hernia, extending to the knee. He had been lying in that situation twelve hours before I saw him. I attempted reduction, but there appearing to be some constriction (not, however, amounting to strangulation) about the external abdominal ring, and no assistance at hand, I determined to put him upon the use of tart. ant. grs. ii, tinct. opii, 3ii, aqua 3vi, in connection with warm poultices to the inguinal canal, with a view to promote relaxation, and ordered him to remain in bed.

18th. Had slept comfortably the previous night; felt little or no pain; had an alvine evacuation during the night, and from the peristaltic action induced therefrom, the greater portion of the protruded intestine had returned within the abdominal cavity. The reduction of the remainder was easy, owing to the amount of

relaxation produced by the previous day's prescription. After the reduction, I immediately applied a suspensory bandage, and directed him to keep his bed for at least a week. I left him, seeing nothing in the case to call for another visit.

19th. To my utter astonishment I was again summoned to my patient, with the startling intelligence that "he is dying." The request was made that Dr. Toomer, of Charleston, should see him with me in consultation, to which I agreed. He accordingly went, and we found him in truly a deplorable situation. Abdomen enormously distended; tongue fiery red, dry and cracked; pulse corded; countenance anxious to the most intense degree; testicles and scrotum one hard, indurated mass, red and exceedingly hot. Dr. T. (from my statement as to how I had left the patient the day before) was extremely puzzled, as well as myself, to account for this sudden peritonitic state; but by close examining and cross-questioning, we discovered that he had gone out the night before, barefoot, in a very hard rain, and then was the mystery solved. No leeches being at hand, we scarified the scrotum and applied warm fomentations and poultices of chamomile flowers, and administered, internally, camphor gr.  $\frac{1}{4}$  (there being considerable prostration), hyd. sub. mur. gr. 1, pulv. opii. gr.  $\frac{1}{4}$ , omni horâ, and applied a blister 12 by 20 over the abdomen, and left him, expecting to find him dead the next day.

20th. Contrary to my expectations, I found the patient considerably improved: gentle ptyalism had been produced; tongue more moist, less red; pulse softer; skin warm and moist; abdomen less distended, and scrotum in a somewhat less inflamed condition. But the patient being very weak, I administered, for that day, brandy, aqua ammonia and laudanum, in stimulant doses.

21st. Very much improved, every symptom of danger having disappeared, with the exception of the inflammatory condition of the scrotum and testicles, the latter being so hard as to cause the apprehension that suppuration would ensue.

22d. Still improving, with exception above mentioned; and so also on the 23d.

24th. Found the patient with his abdomen again tympanitic; tongue red, dry and cracked; pulse corded; countenance utterly changed, almost of the Hippocratic stamp, and extremities very cold. 'He had again been out in the wet.' I ordered friction of dry mustard to the extremities; the blister re-applied, and small

doses of mercury and opium given to keep up the effects of ptyalism. Iodine applied to testicles, the inflammation in which still continuing.

20th. Found him improved, having slept well the previous night. Ordered poultices of corn meal to be applied over the part blistered; continued the calomel and opium at longer intervals, and ordered a little beef-tea and rice gruel.

26th. Much better, with the exception of the testicles. Seeing I could not discuss the abscess which I felt sure had formed, or was about to form, I applied poultices to promote suppuration.

27th. Still improving. 28th. On arriving, I found that the evening before the abscess had burst outwardly. I found the entire tunica albuginea lying loose in the scrotum, together with the epididymis, which I removed with the forceps. I lanced the testicle of the other side, and after discharging the contained pus, I placed a tent in each orifice to promote granulation from the bottom of the wound.

29th. I found him enjoying himself with his pipe—complaining of no pain, but saying that he felt perfectly easy. I dressed the wound with common tepid water dressing, applied adhesive straps around the scrotum, and left him. The last I heard of him he was at work, as hearty as ever before.

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ARTICLE X.

*A Bone lodged in the Rectum, simulating Dysentery.*

MESSRS. EDITORS:—About the 20th of November, 1854, while living in Henderson, Texas, I was called by Mr. S., to see a man servant of his, æt. about 50 years. On my arrival, I was informed that the man had been complaining for two days, of *sharp, cutting* pains in the bowels, and that he had taken a blue pill the first night, and subsequently oleum ricini, which operated on his bowels without relieving the pain. He then alternately administered anodynes and cathartics, with no better success. From the patient, that morning, complaining of so much pain in the rectum, with a frequent disposition to go to stool, his master was fearful he was taking dysentery, as it then prevailed there. Upon examining the patient, I found the skin hot and dry, the pulse considerably accelerated, bowels rather tender; the recti abdominis muscles rigid, and the tongue foul, with red end and edges, though



moist; and great thirst. I was at first about to prescribe as if it were a case of dysentery; but not being satisfied, and as he complained of so much pain about the anus, I determined upon an examination, and having placed him upon his hands and knees, I immediately saw something projecting from the anus, which I discovered to be a bone. I interrogated him as to what he had eaten, in order to arrive at the species of bone, but could get no satisfaction. The projecting part was flat, and the bone seemed, what it afterwards proved to be, of triangular shape—the base being upward and the apex presenting. On seizing it with the forceps and using slight force, he complained loudly and trembled violently. I administered a large anodyne, but still he was no more quiet. The bone seemed to be *bearded*, and pulling at it only seemed to fasten it tighter. I then determined to use the speculum ani, by dilating the sphincter, so as to disengage the bone; but he would not allow me to introduce the instrument, as it gave great pain. I then administered chloroform by inhalation until he was *intoxicated*, and readily introduced the speculum on each side of the bone, and by dilating the parts largely, I saw a flat triangular bone, each line of the triangle being about  $1\frac{3}{4}$  inches long. It being still engaged with the mucous membrane, I attempted to cut it with a strong pair of scissors, but could not. I then gradually worked it out with difficulty, and some pain; considerable hemorrhage followed for an instant. The patient expressed great relief. I cleansed the parts, then administered full doses of opium for twenty-four hours, not allowing any passages for forty-eight hours. He was up and at work at the end of that time, and had suffered no bad effects when I left there, two months thereafter.

The bone proved to be a fish-bone—the fin of a large cat-fish; the point presenting was thin, while one corner of the articulating surface was engaged in the mucous membrane, rendering it hard to extricate.

REMARK.—This case is not a novel one, as foreign bodies are frequently swallowed and lodged at the anus. Yet I have been thus particular in describing the symptoms, to show how easily a physician may be deceived in a case, and that he should be *minute* in his examination, or his *reputation*, as well as his patient, may suffer.

Respectfully,

JAS. C. BILLINGSLEA, M. D.

Foster's, Tuscaloosa Co., Ala.

*An Essay on some of the Distinctive Peculiarities of the Negro Race.*

BY A. P. MERRILL, M. D.

## No. III.

*Fevers*, as we have before intimated, constitute a large proportion, perhaps not less than one-half, of all the ailments to which the negro race is subject in the southern States, requiring medical treatment. This fact appears to be the more remarkable, when we consider, that in their native Africa, the negro race is so much better able to resist the action of febrific agencies than the Caucasian, as to be considered almost exclusively qualified to inhabit extensive regions of tropical country, in which the latter race can scarcely manage to exist. Even there, however, we have reason to believe, that the two races differ in their susceptibilities to the influence of the cause of fever, only in degree; and this distinction may be dependent entirely upon the fact, that the native race has been, for many successive generations, inured and habituated to the constant action of such cause upon their systems, until it has ceased to produce its poisonous or morbid influences, or until it is capable of producing them to such an extent only, as to give rise to those more moderate attacks of fever which are easily cured, and which, in a majority of cases, come to a favorable issue under mere dietetic treatment. We are the more willing to adopt this view of the case, from the constant illustrations it receives from southern experience; the distinction being scarcely better marked between the negro and the white races, either in Africa or America, than is the same distinction between the native and immigrant white population in New Orleans and the southern States generally.

Whatever may be the proper explanation of these existing distinctions between races, and people of the same race, in this and other countries, it is not more certain that they exist, than that fever prevails and always has prevailed among the slave population of the southern States, to a remarkable extent. No existing condition of life, occupation, exposure, or variety of location, affords our slave population any exemption from this form of disease. It affects indiscriminately both sexes, and all ages, from the new-born infant up to the centenarian, although, it is true, that the two extremes of the catenary are less commonly affected than the intermediate ages, and particularly the latter. As with the white race occupying the same localities, negroes of both sexes are most liable to attacks of fever between the ages of twenty and forty years, embracing the most active and vigorous period of life, as well as that in which men and women of the laboring classes are most exposed to those influences which are supposed to predispose them to attacks of disease. It is probably true of both races alike, that laborers in the open air, tillers of the soil, and all whose occupations subject them to constant out-door exposure, are more obnoxious to attacks of

febrile disease, than those who are engaged in branches of business which may be followed under the shelter of roofs.

Idiopathic fevers affecting negro slaves, are mostly of the periodic form. From thirty to forty years ago, this was, by most southern physicians, considered the exclusive character of such fevers among negroes; and although, latterly, since continued, or typhoid fever, has received so much attention from writers on medicine, many medical men in the South have recognized the existence of this variety of febrile disease among slaves, even in an epidemic form, there is still a respectable number of practitioners, of large experience in negro diseases, who do not acknowledge the occurrence of continued, or typhoid fever, within the range of their own observations; or that any change of note or importance has taken place in the character of the fevers prevailing in the South, either among the white or colored population, during the past quarter or half century. They are still content in the pursuit of the same plan, in designating the different forms and phases of fever, which was almost uniformly practiced, before typhoid fever was spoken of in connection with southern diseases. Besides the epithets having reference to the periods of remission, it has been customary, also, to designate different cases by such terms as indicate the seat of the most serious and obstinate local lesion, as well as the general pathological peculiarity. In this way have been brought into common and popular use, the terms intermittent and remittent, brain, gastric, enteric, pneumonic, bilious, congestive, malignant, etc. The use of these and many other expletives, multiplied and varied, as they doubtless have been by both fancy and fashion, in no way interferes with the opinion more or less prevalent throughout the southern States, that the idiopathic disease, primarily affecting the whole system, is the same at the present time, as that which came so constantly under observation in former years, exhibiting, so far as it may be uninfluenced by treatment, precisely the same symptoms, and exhibiting precisely the same therapeutical indications.

The differences of opinion now existing in reference to changes which are supposed to have taken place in the character of southern fevers and in reference to the introduction and prevalence of a new form of fever, of a continued and adynamic or typhoid type, entertained, as they appear to be, by parties of equal capabilities, must have arisen either from a misapprehension of the true character of fevers formerly prevailing, from the influence of novel plans of treatment, or from the fact, that fevers of the kind alluded to, have actually appeared in certain localities without showing themselves in others. Our own experience, extending over a period of more than one-third of a century, does not lead us to the conclusion that any material changes have taken place during that time in the character of southern fevers, as they affect either the white or the negro race. It has not happened to us to meet with a case of typhoid fever, as described by European authors, or one which ap-



peared of necessity to run its own protracted course without a possibility of being interrupted and controlled by treatment. Nor have we had the misfortune to witness a case of idiopathic fever, in which the anti-periodic treatment suitably applied in the early stages, was unavailing or injurious; or one which has pertinaciously prolonged its course for weeks, in spite of such treatment. The experience of some other physicians is in accordance with our own, and hence the difficulty which exists in reconciling the conflicting opinions prevailing on the subject.

*Periodic Fever*, in all its various forms, it cannot be denied, has been, since the first introduction of the negro race into the southern States of America, not only the principal kind of fever, but the principal disease, to which the race has been subject. Nor should this be ranked among the peculiarities of the negro, to distinguish it from the white race, during the same period; for this form of disease has attacked the latter even more generally and violently than the former; and it has, in some portions of the southern States, proved exceedingly destructive to the lives of both. Besides the fact that the white race is more liable to attacks of periodic fever everywhere, its greater suffering and mortality in some parts of the South may be accounted for from the fact, that, in making establishments for planting purposes, the owner of slaves has generally chosen for himself and family the most insalubrious locality. At the period when a large portion of the country, now occupied by cotton and sugar plantations, was in the course of its first settlement, an opinion prevailed—and the same opinion still has its advocates—that the greatest security from fever was to be found upon the most elevated and least productive grounds. These are generally situated, at a moderate distance from water-courses, and beyond the immediate neighborhood of the rich alluvial soils to be subdued and cultivated. Hence the early emigrants to Alabama, Mississippi and Louisiana, generally aimed, after establishing their slaves as a matter of necessity, upon the bottom lands, and upon the immediate shores of the rivers and lakes, to fix their own residences, whenever practicable, upon the neighboring bluffs or ridges of highlands, where they believed themselves less exposed to the causes of periodic fever, and where they could better enjoy the cooling breezes of the summer season.

Taught to believe that the constitution and habits of negroes render them less liable to the pernicious effects of malarial exhalations, so called, the natural expectation was, that although their slaves were located in places where these exhalations are supposed especially to abound, this partial immunity of the race would preserve them from greater danger, than they themselves would be subject to in their chosen retreats. Hence there could be no moral wrong, in the adoption of different and separate places of abode. But rigid experience, which frequently puts medical theories to such severe tests, almost daily demonstrated the fact, that,

not only were the white race, under this arrangement of dwelling places, more liable to fevers than the negro, but that the slaves who were required to be in attendance upon the white family, and those who were engaged in the limited cultivation of the less productive soils of the homestead, were more obnoxious to febrile influences, than their more fortunate but less cherished compeers, employed upon the cotton and sugar fields below.

The difference in the susceptibility of the two races to attacks of febrile disease, has been less distinctly marked, whenever, from choice or necessity, they have fixed their homes in close proximity with each other upon the rich alluvial soils. This has been sufficiently observed to induce many southern planters, in emigrating to new and unimproved regions of country, to establish themselves with their negroes upon the low grounds, as a precautionary measure against fever, and, whenever convenient, upon the immediate shores of the rivers, bayous and lakes, which were formerly considered so detrimental to health. There are now large districts of country which have been settled in this way and brought under successful cultivation, the inhabitants of which bear testimony every year, in the excellent health they enjoy, to the truth of this position. In the early settlement of Louisiana, large plantations were opened directly on the shores of the Mississippi, with the broad river in front, and a vast extent of swamp in the rear, upon which both races have lived for many successive generations, without suffering more from fever than communities sometimes suffer in mountainous districts.

Negroes, in being prepared by nature and habit for the enjoyment of health and comfort in hot climates, might be presumed qualified to resist, to some extent, the action of those causes of disease which are dependent, to a partial extent at least, upon the agency of heat in their production. For this, or some other reason not yet discovered, they are known to be much less liable to the more violent and fatal forms of fever in Africa, than white persons, even although the latter may have been inured to the country and climate by long residence. This is true also, in a somewhat less marked degree, in the Southern States. The experience of the rice-growers of Carolina and Georgia afford, perhaps, the best illustrations of this difference in susceptibility in this country, while the cotton and sugar estates of Mississippi and Louisiana present only a little less striking and prominent examples; and this notwithstanding the greater exposure of negroes to the common causes of disease by their occupation and habits of life.

In periodic fever, as in many other diseases prevalent in the South, the prominent peculiarity of the negro ailment consists in its degree of violence, and, by consequence, in the extent to which it endangers the life of the patient, rather than in any peculiar pathological characteristics of the disease. A negro attacked by intermittent or remittent fever, presents to the eye of the physician

all the usual phenomena of those forms of disease, not to be distinguished from the symptoms of the same disease, as they appear in the white subject. The premonitory symptoms are the same, and the cold stage may be equally insidious, or equally violent, and subject to the same duration in time. The pulmonary and other congestions are likely to be just as severe and urgent, and the following reaction just as violent, with the same thirst, febrile heat, and pain, restlessness, and even delirium, affording indications for the same antiphlogistic and sedative treatment; yet when these remedial measures come to be applied, the effects are found to be more decided, and the danger of excessive medication to be proportionably greater. This is more particularly true of those therapeutical measures which cause sedation and refrigeration. A negro laboring under high febrile excitement, may derive great benefit from blood-letting, and under precisely the same conditions which render this remedy so useful to the white man, but he will require it to be applied to a less extent to produce the same results; and the same is true of other sedative remedies. If, from the want of a proper understanding of this matter, the physician fail to keep it in view, he will frequently be disappointed in results, even although the remedies used may be proper and necessary.

Previously to the discovery of quinia, and its introduction into use in the treatment of periodic fever, the management of negroes suffering from attacks of this disease was a much more difficult and serious matter, than at the present day. Cinchona, although very generally employed as a remedy, was not generally relied upon for arresting and curing the disease in its very beginning. The abortive treatment was not then common, nor was the bark resorted to in most cases, particularly of the remittent type, until the *primæ viæ* had been well evacuated, and the excitement pretty well subdued by antiphlogistic means, with such relief of the local lesions as would enable the patient to bear the use of tonic remedies without inconvenience. Few cases recovered so promptly under this plan of treatment, as to save the patient from the inconvenience of several successive paroxysms. Until alleviated, either by treatment or by the powers of nature, each successive paroxysm became, of course, more and more severe, causing, among other common effects of such continuance of the disease, constipation of the bowels, and rapid accumulations of fecal matter in the intestinal canal. For the removal of these accumulations, the daily use of cathartic remedies was universally approved and practiced, and considered of essential importance to the safety of the patient. A class of remedies of such obvious necessity in all cases of the disease, may well be supposed to have been sometimes used to excess, and thus to afford grounds for the condemnation which the purgative treatment has received from certain authors. Various evil consequences have been attributed to the irritation of the mucous tissues caused by frequent purgations, under the mistaken idea that the disease



itself was more or less dependent upon some morbid condition of these tissues from the beginning. But our own observations have led us to the conclusion that the more common error in practice then committed, was in purging too little. Hence the fatal injury resulting from the influence of medical authors without experience in the treatment of the disease, about which they undertook to give instructions, and the impropriety of southern physicians taking for their guide, the teachings of men who write of the practice suited to fevers in the hospitals of the metropolitan cities of Europe.

No one feature in connection with the periodic fevers of the South, has been more generally recognized by southern physicians, than the surprising rapidity with which these fecal accumulations take place, and which are often entirely independent of ingesta. The outpouring of excretions into the intestinal canal, is pretty much in proportion to the violence and duration of the disease, or the number of its paroxysms. They are supposed to be excretions from the liver and pancreas, and from the follicular glands of the intestinal canal, and in part, perhaps, exhalations and hemorrhages from capillary vessels, independent of glandular action. The latter might, indeed, be supposed to be the principal sources, because of the fact that, when these accumulations take place most rapidly, the excretions of the system are known to be extensively suspended from the influence of the disease. In case of the continuance of the disease for several successive days, unabated by treatment, the quantity of fecal matter discharged from the bowels, even from the operation of mild cathartics, which do no more than cause a moderate increase in peristaltic action, is frequently so large as to strike both the patient and his friends with surprise, and the greater, as they are aware that little or no food has been used. This is often expressed in connection with the inquiry as to the possible source of such quantities of morbid matter.

The purgative treatment, therefore, while the disease could not be promptly arrested by any remedy then known, was essential to the safety of the patient, and could prove injurious only in case of hypercatharsis, or the hydrogogue, and consequently debilitating action of the remedies employed. Unless this indication for cathartics were daily observed, and particularly after every febrile exacerbation, tumefaction of the bowels, attended by tenderness upon pressure, oppression, and restlessness, were certain to supervene, with an enhancement of the febrile symptoms, a partial suspension of healthy secretions, and generally considerable gastric irritability. These symptoms were thought to contra-indicate the use of cinchona, the only anti-periodic then much relied upon, or to render its administration in effective doses impracticable, on account of its ejection from the stomach.

Although the treatment of fever then pursued may have been, with propriety, called active, on account of the amount of medication employed, it was in fact merely expectant, inasmuch as the remedies

employed were intended to do little more than to remove the products of the disease, and to guard against their cumulative influence, and tendency to enhance the gravity of the symptoms; thus enabling the powers of nature to overcome the action of the morbid cause, and gradually restore the patient to a state of health. Cinchona, in substance, was not unfrequently used in union with serpentaria, or some other of the bitter tonics, and sometimes with the further addition of the saline cathartics, and often with good remedial effects, but never with that confidence in its anti-periodic power, which is now accorded to its proximate principle, quinia. To this treatment was often superadded the use of tartar-emetic, or ipecacuanha, in nauseating doses, with a view to moderate and restrain the febrile excitement, and frequently with the unintentional effect of causing watery dejections of a debilitating character from the bowels.

It will be perceived, from this hasty outline of treatment, that its tendency was to subdue the vital forces and debilitate the system, thus favoring the accession of the adynamic condition, which is always found to present serious obstacles to the rapid recovery of negroes from febrile affections. Their physiological peculiarities, of which we have before spoken, might lead us to expect this. Recoveries from fever were, on this account, frequently slow and imperfect, causing the loss of much valuable time, and often resulting in the establishment of chronic lesions, not only rendering the slave of inferior value for the season, but in many cases laying the foundation for a tedious decline and premature death. An attack of fever of any considerable degree of severity and long duration, could scarcely be expected to run its course to final recovery, after beginning, perhaps, as an intermittent, and passing, for want of remedial efficacy, into the remittent type, and only subsiding after great exhaustion of strength and vital energy, and after the establishment of serious local lesions, without inflicting permanent injury upon the constitution. Tuberculosis, rheumatism, neuralgia, bronchitis, chlorosis, habitual constipation, various forms of indigestion and of uterine disease, were common consequences of the shock thus given to the system.

The introduction of quinia into use in the treatment of periodic fevers worked a great revolution in practice in the South, and particularly in plantation practice among slaves. Its true value to this population was slow to be discovered, and even at the present time is not, perhaps, fully appreciated, although it may be generally acknowledged, that it has added greatly to the productiveness of slave labor, and, by consequence, to the national wealth. The effect upon these, produced by a material abridgement of the time lost by sickness, the preservation of the negro constitution from the injuries inflicted upon it by protracted fevers, and the material prolongation of negro life, is not likely to be over-estimated. It tells largely indeed, upon the amount and value of all the agricultural products,

which are the results of slave labor, in all parts of the civilized world where negro slavery is known.

But the revolution in practice, brought about by the discovery and introduction into use of quinia, like most other revolutions in medicine, was slow and difficult of accomplishment. The new remedy being considered of the precise character of cinchona, it was regarded as a mere substitute for that article, and its equivalent quantity being nearly ascertained, the common practice at first was to give it only in very small and equivalent doses, and always under the same conditions, which had come to be considered, from long experience, indications for the use of bark in substance. Indeed, it was then shrewdly suspected by many, that greater mischief might arise from an untimely and immoderate use of quinia, because the stomach of the patient could not be relied upon to correct the error of the prescriber by rejecting it, when not in a condition for its use, as was supposed to be the case with the grosser material. Fears were consequently entertained that mischief might often result from its use in too large quantities, and also from its exhibition without due regard to the period of apyrexia. On account of these apprehensions, and the uncertainty which always attends upon new and unproved plans of treatment, experiments were made with extreme caution, and with what are now considered minute doses of this remedy. In plantation practice, this minuteness of dose was, perhaps, favored to some extent by the costliness of quinia in the early period of its use.

It is unnecessary to enter here into a detailed account of those experiments, which led to the system of treatment in vogue at the present time, the object of which is to employ this powerful anti-periodic remedy, as to cut short or obliterate the fever in its very inception, and thus to obviate the establishment of those local lesions, the consequences of fever, which, while they tend to perpetuate the febrile excitement by the influence of local irritation, create a necessity for the use of alterative and contra-stimulant treatment for an indefinite period of time. The vast accumulations of excretions in the intestinal canal, before referred to, as the effect of repetitions of the febrile paroxysm, being thus prevented, or very much lessened, cathartics become less important and often unnecessary. The consequent abatement in their use has led to the more confident condemnation of the former practice, without due consideration of the change which has taken place in existing indications. Northern and European writers exultingly refer to this change of practice, as evidence that the purgative treatment formerly so much relied upon was unnecessary; but every southern physician must be aware that, if the use of quinia were to be now interdicted, and thus deprive physicians of the means of subduing the disease at the very beginning, the same purgative treatment would have to be resumed.

These remarks are not less applicable, perhaps, to the white than



to the negro race in the South, but there are some peculiarities in the treatment of the latter which deserve to be noticed. Either from the higher susceptibility of negroes to the anti-periodic influence of quinia, or their exemption from the graver forms of periodic fever, consequent upon their peculiar adaptation to climates where these fevers most prevail, rendering their attacks less serious and obstinate, and probably from both causes united, quinia exerts a curative influence over them, if administered in the first remission of the disease, more prompt and decided than over white persons under similar circumstances. Smaller doses are therefore required for the negro than for the white man, while the sedative influence of large quantities of quinia upon the negro constitution is more serious and alarming, sometimes calling for the use of diffusible stimuli to a considerable extent to relieve it. The most effectual remedy of this class which we have used is carbonate of ammonia. This appears indeed, to be an antidote to what may be considered the toxical effects of quinia upon the negro constitution.

It appears to be generally conceded that negroes are much less liable to be attacked by that form of febrile disease, called yellow fever, than white persons. In tropical cities, they are classed with the exempts; and in New Orleans, Mobile, and other cities in the South, they are also considered as being liable to the disease only to a moderate extent, and in its mildest form. As we travel northward, we find the negro race more liable to suffer from this form of fever, whenever the cause of it exists with sufficient intensity to produce an epidemic. Two reasons may be given for this peculiarity. The first is the fact that negroes, on account of their adaptation to hot climates, may be placed among the most favored of climatized persons; and the second, they are, perhaps, as a race, and certainly from their habits of life, less liable to gastric inflammation than the white race. Local lesions, therefore, which follow attacks of fever, although, perhaps, quite as likely to occur among negroes as white people, more commonly in the former, fix themselves upon other organs than the stomach, the implication of which is the distinctive peculiarity of yellow fever. Whenever yellow fever is prevailing as an epidemic, therefore, it is common to find negroes attacked with every symptom of the early stage of the disease, and with a dangerous degree of violence; but when the gastric lesion might be expected to become developed in a white person similarly attacked, the stomach of the negro remains intact.

The mulatto, and all the grades of admixture of white and black blood, are obnoxious to attacks of yellow fever, pretty much in proportion to the preponderance of white blood, and when persons of this class do become affected with the gastric lesion, they are perhaps, even less curable than white persons, on account of their greater feebleness of constitution. Nevertheless it is no less true, that every variety of mixed bloods is capable of becoming so fully climitized, even although they may be natives of northern countries,

as to be classed among those who are exempt from attacks of yellow fever; and this may happen either from a long residence in the South, or from having suffered an attack of the disease.

[*Memphis Med. Recorder.*

*The Medical Virtues of the Compound Fluid Extract of Tephrosia Virginiana.* By B. O. JONES, M. D., Atlanta, Georgia.

Fully impressed with the many improvements and discoveries of the age, both as regards science and literature, as well as every other department of life, it would scarcely be expected that one so humble as myself should bring much that is important to the shrine of medical literature at the present day: yet, when we reflect that age after age—from the days of *Æsculapius* down to the present time—have each brought in their contributions to swell the volumes of medical literature, and that discovery after discovery, the result of thorough and scientific investigation, have greatly astonished the world, still may we be permitted to hope that the end is not yet, and that the half has not yet been told, and that the “great healing art” shall take her position co-equal with the wonderful advancement of other departments of knowledge, and with healing on her wings give health and comfort to the afflicted of every land and every clime beneath the sun.

Under such impressions as these, I have ventured to introduce to the medical world the result, to some extent, of my experience in the treatment and cure of diseases with the Compound Fluid Extract of *Tephrosia Virginiana*, or as I have more commonly called it, in honor of the first discoverers “Indian Sarsaparilla;” and if, on farther investigation, it shall meet with the approbation I contemplate it will, I shall feel I have discharged an obligation, long resting upon me, in giving the history and virtues of this plant to the profession.

*Tephrosia Virginiana* is of the order Leguminosa; sub ord. Papilionacea, a well known indigenous perennial plant, growing abundantly throughout most of the Southern States, putting up early in the spring, growing to the height of eighteen or twenty inches, flowers in June and July, and attains its maturity in August and September. The whole plant is medicinal, and should be taken up by the root in early summer, whilst in full bloom and carefully dried in the shade.

Preparation of Compound Fluid Extract *Tephrosia Virginiana*:

*Tephrosia Virginiana*, . . . 8 ounces.

*Rumex Acutus*. . . . . 2 “

*Aqua Font.* . . . . 4 quarts.

Boil down to one quart.

With the above mixture prepare the following for use, which will keep for any length of time without injury:

|                                    |           |   |         |
|------------------------------------|-----------|---|---------|
| Comp. Fluid Ext. Teph. Virginiana. | . . . . . | 4 | ounces. |
| Alcohol Dilutum, (Brandy,)         | . . . . . | 4 | "       |
| Saccharum Album.                   | . . . . . | 2 | "       |

Mix and digest for several days, and then strain through muslin and it is ready for use. Dose for an adult from one-half to one fluid ounce, repeated as often as symptoms demand, with a less dose in proportion for children. It should be given at all times with a view to its tonic and stimulant effect, and continued for some time. I have seen results from this medicine, or from other unknown causes, nature perhaps, truly astonishing; so much so, that I should forbear to mention them, preferring that others should test its virtues also, and decide accordingly, receiving only the genuine coin and admitting only that which has been unmasked, weighed in the balance, and amply sustained by tangible data.

I will venture, however, to mention in this connection a fact well known to every practitioner of medicine, that there is a time in the treatment of many diseases, and especially Typhoid fever, when there can be little if any use for active medicine—the patient not yet sufficiently recovered to dispense with medicine altogether—when one imprudent act of the physician will prove almost fatal; still it is of the greatest importance that something should be done to perfect the cure already commenced. Some mild stimulating tonic, having a slight action on the bowels and the secretive organs generally, would seem to meet the indication. This, we feel authorized to say, will be accomplished as well by the use of this medicine as any other that ever came to our knowledge.

It may not be improper, indeed I think it necessary, to mention a few important cases treated mainly with this medicine:

CASE I.—Fanny, a colored woman, the property of N. M., of Coweta County, Georgia, had been sick with general dropsy for some eight or ten months, occasioned, in all probability, by Intermittent fever, attended with enlargement of the liver and spleen, together with obstruction of the catamenial discharge. Had been treated with the usual remedies in such cases, to wit: Cathartics, Diuretics, and Tonics, to which may be added mercurials, iodine, &c.; indeed all the common medicines recommended by the books of the day for the cure of those diseases, with but little if any effect. The disease continued gradually, to get worse, until it assumed strong indications of a fatal result, and thus remained for several days, when I became satisfied if something more was not done, and that speedily, the patient would surely die. I then mentioned the fact to the owner of the woman and requested consultation, to which he seemed unwilling, saying at the time he had no hopes of her recovery now or for some time past, and that he thought it best to let the woman die in peace; besides he was unable to defray the expenses of such policy, and that he preferred my continuing in the case to the end, and if I could see at any time that there was anything possible to be done, to fill the indication at



once. I mentioned that the Indians used the Tephrosia Virginiana in the treatment of dropsy with seeming good effect, and proposed its use in this case, to which he readily assented. The patient was immediately put under the full influence of this medicine, and kept so for several days, when the symptoms became greatly improved, and in the course of five or six weeks was almost entirely cured.

CASE 2.—A. M., aged 25 to 30 years, of Fayette County, Georgia, Typhoid fever.

*Symptoms.*—Pain and stiffness in the back of the neck, extending down the left hypochondriac and lumbar regions. Pulse 120 to 130. Skin of head and upper extremities hot and dry; inferior extremities cold and shriveled; a dark brown incrustation upon the tongue, and the teeth and gums covered with sordes. Had been confined some eight or ten days; had taken no active medicine, nor could be prevailed upon to do so; however was induced by my suggestion to use the Compound Fluid Extract of Tephrosia Virginiana, which he continued with a few other mild remedies, such as friction and sinapisms to the spine and extremities, until a cure was effected.

CASE 3.—Philip, a black boy, aged some 18 or 20 years, had rheumatism of several years' standing. Left inferior extremity useless, stiff and emaciated. General health impaired; subject to occasional acute attacks in other parts of the system, attended with much pain, swelling and fever. Put him under treatment with use of the Compound Fluid Extract of Tephrosia Virginiana, and continued with little if any other medicine for some two or three months, when I had the satisfaction of finding the disease entirely removed, and he has been well, with the exception of a slight stiffness in the hip joint, ever since.

Thus will be seen, I hope, sufficient to cause at least a farther investigation, and to the ordeal of critical analysis and experiment these observations are submitted, with a desire upon my part that the truth should be evolved, whether the virtues of the article, which I have brought to the notice of the profession, shall rise or fall.—[*Atlanta Med. and Surg. Journal*.]

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*Curative Treatment of Prolapsus Uteri, by the local application of Tannin.* By CHARLES A. BUDD, M.D., Fellow of the New York Academy of Medicine.

The many and varied forms of uterine disease resulting from an injudicious use of pessaries, as well as the irreparable damage done by means of cauteries, either actual or potential, or by extirpation of portions of mucous membranes, which have for their object the diminution of the capacity of the vagina with a view of curing prolapsus, have led me to add my testimony in favor of a practice first recommended by Prof. B. F. Barker, of this city. I allude to

the application of lint soaked in a saturated solution of tannin; and if the perusal of the following cases, selected from a variety which have come under my observation, will induce a trial of the treatment alluded to, I feel confident that in all cases to which it is applicable, the result will be equally gratifying. There are, to be sure, certain abnormal conditions in which it is not applicable, as, for example, a very straight sacrum, or a loss of substance in the perineum due to laceration or other causes; or if there be any pathological condition of the cervix, it must be removed by appropriate treatment; and then, if the prolapsus continue, the utility, I may say infallibility, of the method alluded to, becomes apparent. But in simple cases of prolapsus, whether incipient, partial, or complete, depending upon a mere relaxation of the uterine supports, I have never known it to fail where the treatment has been faithfully persevered in. The manner recommended by Prof. B., and the one I have followed, in its principal details, is as follows:—From a double thickness of lint a triangular portion is cut out, of a sufficient size to fill the capacity of the vagina when rolled up so as to form a cone, near the apex of which is attached a piece of string to facilitate withdrawal. The patient being placed upon her back, with the hips slightly elevated, the uterus is replaced in situ, and the lint, soaked in a saturated solution of tannin, is applied with its apex downward and its base immediately in contact with the os tinæ. This is repeated once in twenty-four hours, for a period of time in accordance with the extent of the displacement. I have usually found a daily application for a period of about a month, to be sufficient to perfect a cure. During this time, and subsequently, constipation must be rigidly guarded against, and the state of the general health attended to. The vagina soon begins to acquire its wonted tonicity and contractility, and the lint is consequently obliged gradually to be lessened in quantity; the strain being taken off the round ligaments, also allows them to return to their normal condition. The following cases exemplify the admirable effects of this plan of treatment.

CASE I.—Mrs. G., æt. 24 years, the mother of two children, the youngest fifteen months of age, had always enjoyed good health until the birth of her last child. The placenta in this last accouchement (I having attended her in both) was retained over three hours, in consequence of irregular uterine contractions. She has been complaining ever since of pain in the lumbo-sacral region, with bearing-down pains in the hypogastrium; great constipation, with vesical and rectal tenesmus; and a sensation of faintness after an evacuation, leucorrhœa, &c., &c. Upon examination, I found the cervix protruding at the vulva, extensive ulceration extending into the canal of the cervix, inflammation of the posterior wall of the uterus, and enlargement of the organ itself, its long diameter measuring  $4\frac{1}{2}$  inches. After three months' treatment, these conditions, save the prolapsus, were all removed, the applications to the

cervix having been made weekly, and without the aid of a speculum, and the uterus at this time measuring less than three inches in its long axis. The treatment consisting of the lint and tannin, was soon after commenced; and in about three weeks' time she was enabled to resume her ordinary duties. She is now four months pregnant with her third child, all treatment having been suspended about six months ago.

CASE II.—Mrs. S., æt. 20 years, the mother of one child aged two years, applied to me in July, 1854, suffering from all the symptoms of uterine prolapsus. She had aborted with a three months' foetus about a month previous, but had been complaining for two years before. An examination revealed incipient prolapsus, the cervix lying on the floor of the perineum, and slight epithelial abrasion of its mucous surface. Two applications of nitrate of silver removed this; and the use, for ten days, of the lint and tannin, effected a perfect cure.

CASE III.—Mrs. G., æt. 54 years; a widow, the mother of five children, the youngest sixteen years of age. Had ceased menstruating about ten years previous. She stated to me that upon using the slightest exertion, such as lifting or straining at defecation, her womb would entirely protrude from the vulva. She had used a variety of abdominal supporters, and had attempted on several occasions to wear pessaries of different kinds, and at that time, was wearing constantly a T. bandage. Upon examination I found the uterus just within the vulva; and, requesting her to lift a chair, the whole organ was protruded, dragging with it the posterior wall of the bladder; it was perfectly healthy in appearance, though somewhat atrophied. I commenced the treatment with the lint and tannin, interdicting active exercise, and in six weeks ceased making any applications. She gradually resumed her ordinary duties, and is now (some two years since) perfectly recovered, and is considered a very active old lady. She has not had the slightest disposition to a return of the displacement, and enjoys excellent health.

I have here given an example of the three different degrees of prolapsus,—incipient, partial, and complete,—illustrating the curability of this treatment in each. I could, if it were desirable, cite many others which have been under my observation, and which have resulted, without a single exception, in a perfect and complete restoration.—[*N. Y. Med. Times.*

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*Experiments with several pretended Substitutes for Cinchona in the Military Hospitals at Rome.* By Dr. FELIX JACQUOT.

### 1. Arsenic.

This paper is a summary of a memoir addressed to the Conseil de Santé des Armées, on the employment of arsenic in the treatment



of intermittent fevers in general, and of those of Rome in particular, and which was based upon 282 observations.

1. *Mode of Experimenting.*—In order to establish the efficacy of arsenic as a febrifuge, its administration should be limited to those cases which have resisted treatment without the use of quinine. The author of the paper before us has not strictly followed this course, since, giving the arsenic at the outset in the majority of the cases, he had no means of judging whether the fever was about to proceed steadily with its paroxysms, or whether, on the other hand, it had a tendency to spontaneous disappearance. But as the sulphate of quinine was administered in the same way, it was at least in a position to establish the comparative efficacy of the two medicines. His researches, too, permit him to consider separately the treatment with arsenic alone, and the complex treatment by this remedy, emetics, &c. Arsenic alone cut short the fever only in 8·33 per cent. of the cases, but the complex treatment in 16·66. But while the efficacy of the arsenic is doubled by the conjoined use of emetics, the febrifuge powers of the sulphate of quinine are so great, that those of emetics simultaneously employed are lost, or absorbed in them; thus, the percentage of fevers cut short by sulphate of quinine without emetics is 49·52, and by sulphate of quinine with emetics 50·47, as calculated on 210 fevers.

2. *Formula, Dose, Duration of Use of the Arsenic.*—The formula used was the following:—Arsenious acid, 1 gramme; distilled water, 1 kilogramme. The arsenic is boiled with more than this quantity of water till dissolved, and the latter reduced to the prescribed quantity, some soda being added should the solution be imperfect. The dose of solution was administered in canella-wine. The author could derive nothing but confused ideas of the proper dose from writers on the subject, nor yet of the rapidity of its action.

3. *General Accidents, Tolerance.*—Most subjects bear without general accidents, three centigrammes at the outset, though the author has seen one centigramme produce serious local and general accidents; yet, on the other hand, the tolerance has persisted sometimes in spite of long continued large doses. Out of 72 cases treated by arsenic, he has only noted general accidents six times, never fatal, and only once a source of anxiety. The local and general tolerances are quite independent of each other. The author considers the action of arsenic to be sedative, hyposthenic. In one of his subjects the pulse fell to fifty. General loss of strength, lassitude particularly affecting the legs and loins, have appeared to him the earliest phenomena of poisoning by moderate doses of arsenic; and while he thus differs from those who class it among the tonics, he asserts that it has no tonic operation, even upon subjects suffering under marsh cachexia.

4. *Local Accidents, Tolerance.*—Out of the 72 cases treated by arsenic, 24 or 25 presented gastro-intestinal accidents. The first

dose of one centigramme may cause vomiting and epigastric pain; but, on the other hand, he has seen six centigrammes given by the mouth tolerated; and in others he has seen the arsenic continued for a month without the stomach revolting against it. Although the conditions favourable to the tolerance are not well known, yet he can mention the smallness of the dose, its ingestion in divided portions, and the quantity, and perhaps nature, of the vehicle. The local accidents are nausea, vomiting, diarrhoea, malaise, and sometimes pinchings at the epigastrium, and an insurmountable disgust at the medicine. Either general or local accidents followed in 31 out of his 72 cases, or in 43 per cent.

5. *Autopsies of Individuals treated with Arsenic.*—In three subjects examined, nothing was discovered which could be imputed to the employment of the arsenic, either in the heart, or in any other part of the body.

6. *Degree of Efficacy of the Arsenic, Comparison with Sulphate of Quinine, &c.*—The cases on which M. Jacquot founds his comparison, are those which had not received any previous treatment calculated to interfere with the accuracy of his experiments. He thus tabulates his results:

|                                                                                                              | Sulphate of<br>quinine, | Arsenic. |
|--------------------------------------------------------------------------------------------------------------|-------------------------|----------|
| Fevers cut short—i.e., which have not presented a single paroxysm from the commencement of the medication    | 50·00                   | 13·88    |
| Fevers which had presented one paroxysm in spite of the medication, but in which the second has been averted | 25·71                   | 22·22    |
| Fevers which have presented two paroxysms, but in which the third has been averted                           | 7·61                    | 12·50    |
| Fevers which have presented three or more paroxysms                                                          | 5·23                    | 34·72    |
| Fevers which cannot be introduced into these categories, but which must be regarded as not cut short         | 11·42                   | 16·66    |

The arsenic, with or without the emetic, has cut short the fever 13·88 times per cent.; the sulphate of quinine, with or without emetics, 50· times per cent.; that is to say, the arsenic has been efficacious as 1, the sulphate of quinine three times and a fraction. The arsenic with emetics cut short the fever 16·66 times per cent.; the sulphate of quinine without an emetic, 50·47 times per cent.: that is to say, the arsenic has been efficacious as 1, the sulphate of quinine as 3 and a fraction. The arsenic without emetic has cut short the fever 8·33 times per cent.; the sulphate of quinine without emetic, 49·52 times per cent.; the proportion being arsenic as 1, to sulphate of quinine as 5 and a fraction. Lastly, in comparing the cases the most favourable to the arsenic—viz., those in which it was administered in large doses, three to ten centigrammes, accompanied by emetics, and a diet whose only limit was the appetite of the patient, with the cases least favourable to the quinine, we arrive at the following results:

Fevers cut short by the arsenic, 9·68 per cent.  
 “ “ “ quinine, 49·52 “

As respects the cases not cut short, it will be perceived, on referring to the first four figures of the two vertical columns of the table, that in the instance of the fever treated with quinine, the numbers are smaller and smaller according as we examine the categories of cases more and more refractory, whilst the contrary is noticed in the instance of the arsenical treatment. The contrast is perfect.

In about 35 cases it was possible to compare the effects of the quinine and arsenic, the two medicines having been administered in succession to the same patient, either for the same fever, or in two separate attacks. In a sixth of the cases, the arsenical and quinine treatment were of little efficacy; in another sixth, the two medications were followed by some success; in the four other sixths, the sulphate of quinine showed itself the more active, or the only active remedy of the two; and one observation furnished a very marked instance of fever resisting the sulphate of quinine, and cured by arsenic. In short, the author concludes that we see more fevers which resist arsenic yielding to quinine, than we do fevers refractory to quinine disappearing under arsenical treatment. He believes, also, that he has established the fact of the greater activity of the sulphate of quinine in the cases which have received no previous arsenical treatment (54 per ct. cut short), than in those first submitted to the action of arsenic (40 per ct. only cut short).

The general conclusion he draws is, that sulphate of quinine is not replaceable by arsenic; and especially is this true in respect to the fevers of hot climates, where it is necessary to apportion the dose to the intensity of the malady; under the latter circumstances we are immediately arrested in the arsenical treatment by the fear of poisoning. In those countries where from one paroxysm to another, the pyrexia may become more severe, remittent, and pernicious, arsenic should not be employed during the endemo-epidemic season.

*Confirmation of results by other observers.*—After mentioning MM. Mayer, Cordier, Pasquier, Armand, and Gougé, as arriving at similar conclusions to his own, he states that in the Pontine marshes, Dr. Minzi, physician to the central hospital of that country, has experimented with arsenic in more than 400 cases, giving it to the extent of three centigrammes a day, and at last abandoning it from want of success. M. Salvagnoli Marchetti also, out of 16 cases, found 15 resisting arsenic.

*Arsenic in inveterate Fevers, and in Marsh Cachexia.*—The observations of M. Jacquot do not encourage recourse to arsenic in inveterate fevers; and M. Cordier also concludes from his experience in Algeria, that it is the more recent and slighter cases which yield most readily to arsenic. In the palustrial cachexia he thinks that arsenic may perhaps be used as an alterative, but that it is incapable of replacing iron and other tonics, which it is necessary to conjoin with it.



*Relapses.*—In preventing relapse, arsenic is inferior to sulphate of quinine. Out of the 72 cases treated with arsenic, the relapses were 22 or 30 per cent.—certainly a large proportion. They were less frequent in the cases treated with quinine. The relapses occurred even during the period of administration of the arsenic, which was continued after the cessation of the fever. This was not observed in the instances of the quinine treatment.

*Arsenic in the Ingravescant and Remittent Fevers.*—In 5 cases it was observed that, in spite of and during the employment of arsenic, the simple fever became aggravated, remittent, sub-continued, and pernicious—*à fortiori*, then, this medicine would have no action upon a fever already of this character.

*Conclusions.*—Arsenic is not for a moment to be regarded as a substitute for sulphate of quinine. It will probably find a limited place in the treatment of indigenous intermittent fevers, but it has absolutely no pretensions against the recent endemo-epidemic fevers of hot countries. We are scarcely authorized to employ it except in the fevers which resist all the preparations of bark. Uncertainty and contradiction reign over almost all points relative to arsenic. It is a medicine which we cannot yet handle with the double certainty of obtaining the effect desired, and of avoiding the dangers connected with its administration.

## 2. Parsley Oil (*Apiol*), or Juice of Parsley Seed; Colophane treated by Nitric Acid.

The author condemns the colophane almost absolutely. Of the efficacy of the parsley oil he expresses great doubt. The single case out of six trials in which the fever appeared cut short by it, might have been an instance of spontaneous recovery, since 7 out of 19 cases submitted to expectation terminated in this way.

## 3. Hydrochlorate of Ammonia.

The doses employed were eight to twelve grammes in the day, and the experiments were made upon 21 subjects. The following table represents the results:

|                                                                                               |                     |
|-----------------------------------------------------------------------------------------------|---------------------|
| Fevers cut short . . . . .                                                                    | 6, or 28 per cent.  |
| Fevers which presented one paroxysm . . . .                                                   | 1, or 4 per cent.   |
| Fevers which presented two paroxysms . . .                                                    | 1, or 4 per cent.   |
| Fevers which presented three or more paroxysms in spite of the medicine . . . . .             | 11, or 52 per cent. |
| Fevers which cannot be placed in the above categories, but which were not cut short . . . . . | 2, or 8 per cent.   |

The first number of 28 per cent. of fevers cut short would show a powerful febrifuge operation, were it not for the fact that more than a third of the cases submitted to expectation recover spontaneously. The remaining numbers, too, are little in favor of the efficacy of the medicine, since more than half were uninfluenced by it. The observations of M. Jaquot have not only established that the greater part of the fevers are completely refractory to this

salt, but that the marsh cachexia becomes quickly developed, and assumes an accelerated course during its administration where the fever is not arrested, and also that the sulphate of quinine succeeds admirably in arresting fevers against which sal ammoniac is powerless. The conclusion of the author is, that this salt bears no therapeutical pretensions in the intermittents of hot countries, and that there is much doubt of its capability of rendering any service in those of our own climate.—[*Archives Générales. Brit. and For. Medico-Chir. Review.*

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*Notes on the Application of Statistics, to Questions in Medical Science, particularly as to the External Causes of Diseases.* By W. P. ALISON, M D., Edin., D. C. L. Oxon., Emeritus Professor of Practice of Medicine, Edinburgh.\*

It has so frequently and so plausibly been urged, against all the inquiries and studies which are termed Statistics, that the form of such reasoning may be applied to the support of almost any proposition, that it becomes an object of very considerable importance,—in the view of any one who is truly convinced of the importance and frequent practical application of such inquiries,—to point out the circumstancedness of any question, or departments of any science, in which this kind of information is truly requisite, and the conditions under which it may be trusted. This is especially true of the science of Medicine, because there is one great department of that science,—that which we term Etiology, or the doctrine of the external causes of diseases, in which our knowledge is acquired almost entirely in this way. It is in very few cases only, that our knowledge of the essential or intimate nature, either of diseases or of the powers in Nature which excite them, enables us to form any anticipation of the effects of those powers; and it is simply by *empirical* observation,—facts observed and recorded, and the frequency of their recurrence noted, although not explained, *i. e.*, it is by the mere *force of numbers*, or by *statistics*, whether stated exactly in that form or not,—that our information on that subject, and practical rules for the prevention or treatment of diseases, founded on that formation, are acquired.

I have elsewhere stated,† what seems to me to be sufficient reasons, for the application of Statistics to inquiries of this kind being more frequently and obviously required, than in any of those which are made, either into the nature of diseased actions (or of vital actions in general), or the power and mode of action of remedies. The questions which we propose to ourselves in Etiology are truly *simpler* than either in Pathology or Therapeutics,—they in-

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\* Read to the Statistical Section of the British Association at Glasgow, Sept. 1855, (by Sir Archibald Alison.)

† British and Foreign Review, etc., January and April, 1854.

involve little or no exercise of judgment, simply the observing and recording of facts, according to directions which are made known, and the sufficiency of which can easily, at any subsequent time, be estimated;—the sources of fallacy connected with them are *less numerous*; and, more especially, we can usually remark this, as to the observations by which we can fix on those antecedents of a disease, to which we ascribe the power of producing it,—that the *positive observation*, of the alleged effect following the application of the cause, is supported by a large body of *negative observations*, often not stated in words, but truly essential to the validity of the inference; and, therefore, this class of observations is often more truly and efficiently statistical,—the number of individual cases really contributing to the result obtained, is very much greater, and the evidence afforded more decisive, than it can easily be made in the other departments of medical inquiries; sometimes, therefore, greater than those who have accustomed themselves only to physiological or pathological inquiries, or to watching the effects of remedies, can easily perceive.

The importance of this observation will not be denied, when we remember that this is the department of Medical science which is truly of the greatest practical importance. The knowledge of the *external causes* of diseases, is that which leads most directly to their prevention; and to the preservation of those lives especially, from which the greatest amount of labor of all kinds may be obtained, and which are, therefore, generally regarded as most valuable to a state.

In the course of the present century, improvements have been made in Medicine, which will bear comparison in their practically beneficial tendency, with those which have made this age and this quarter of the globe so illustrious, as regards the applications of any other Sciences to practical purposes. These have been almost exclusively in this department of medicine, and may be truly said to rest, as yet, almost exclusively on Statistics; anticipating, probably by several ages, any information within the power of the human race, as to the intimate nature of the phenomena which are thus recorded. It is simply by the force of numbers, attesting the simple fact of a disease, easily recognised, showing itself in many persons within narrow limits of time and space, and there only, that we have learnt how the poison of Small-pox may be diffused; and that it may be disarmed of its power over the human body, by being first taken into, and modified by its passage through, the body of the cow, and then applied, in almost infinitesimally small quantity, to the human body itself, and there exciting a certain specific inflammatory process, absolutely devoid of danger, and incapable of communication through the medium of the air, and, what is still more inconsistent with the knowledge we have of other changes in nature; that this modifying and preserving effect on the human body, produced in infancy, continues equally per-



fect, in a great majority of cases, after 60, 70, or 80 years, if life shall continue so long,—*i. e.*, after we are certain that the body on which it has been produced, has been repeatedly *worn down and built up again*, so that the poison introduced into the structure in advanced life, can no more be said to come in contact with living matter which has gone through the process of vaccination in infancy, than, according to the paradox of an ancient logician, a man can be said to have bathed twice in the same water, because he has bathed twice in the same river.

So also it has been simply empirical observation, and, therefore, by reference to statistics, that we have acquired within these few years, information touching the extension of another epidemic, less frequent, indeed, but attended with peculiar interest, and often with extreme fatality, the Puerperal fever, which enables us, with almost absolute certainty, to predict that its propagation, after the manner of an epidemic, may hereafter *always be prevented*. For, I believe, I may safely assert, that the statistical observations of Dr. Semmelweiss, in the great Lying-in Hospital at Vienna, where upwards of 6000 births take place in a year,—being in exact accordance with what has been seen in this country, have unequivocally shown :

1. That this disease is, in fact, a case of the Diffuse inflammation or Erysipelas, attended with the same peculiarities in the extension of the inflammation, and in the nature of the effusion, and the same variation as to the nature of the accompanying fever in different epidemics.

2. That one immediate exciting cause of this form of inflammation, which may always be suspected when it prevails epidemically, is the *cadaveric* poison,—often evolved, during the decomposition of the human body, from whatever cause death may have taken place; but during one stage of that decomposition only, *viz.*, that early stage during which the *post-mortem* inspections for the investigation of the cause of death are most frequently made.

3. That when this form of inflammation assumes the form of epidemic puerperal fever, the mode of its transmission from one patient to another, is by accoucheurs or nurses, themselves in good health, but to whose persons or clothes minute portions either of the *effluvia from others* already affected, or of this *cadaveric poison*, have become attached; and,

4. That when the obvious precautions are taken, to prevent any persons to whom, in either of these ways, the poison can have thus adhered, from acting as accoucheurs or nurses until effectually purified, no “epidemic extension” of puerperal fever is seen.

It is seldom, no doubt, that this last proposition can be submitted to a searching scrutiny, as in the year 1846, at the Vienna Hospital, under Dr. Semmelweiss, when the number of deaths after these precautions were adopted, was diminished by no less than 400 in that hospital alone, and in a single year; but when it is

added, that each of the propositions above stated is quite in accordance with observations made and recorded (although the bond of connection among them had unfortunately not been duly observed) in this country, whenever puerperal fever has been epidemic, whether on a large or small scale,—so that it would be easy to collect statistical evidence of the same kind from every such epidemic, wherever any record of the facts has been left, to establish each of these propositions,—the force of this statistical evidence becomes such as to justify the sanguine anticipation above announced.

Our information as to the mode of extension of the malignant Cholera, is, unfortunately, as yet less certain or precise; yet I think we may say it is so far advanced, that we may entertain a confident *hope* of its being very soon such as to disarm any epidemic cholera, in this climate, at least, of all its terrors.

I allude to that subject here, chiefly because I think it affords an example worthy of notice, of what I have already stated, as to the frequent misapprehension of the strength of evidence, simply empirical, or founded on statistics, which may often be obtained in inquiries of this kind.

I mentioned formerly in a paper on this subject, which I had the honour of laying before this Association at Birmingham, a *single case* which I saw in the year 1832, and which I have always maintained to have been sufficient, for any one who duly attended to the statistical evidence it afforded, to establish the proposition, that the disease is capable of propagation in this climate, by the intercourse of the sick with the healthy, without pledging us to any opinion as to the mode of communication, or as to the existence of other modes. Now that it is generally admitted, that the assertion then made was correct, the question for discussion now being (as stated by the Editor of the British and Foreign Medical Review) “*not* whether cholera is contagious or not, but *how often* it spreads *by the agency of human bodies (i.e. by contagion)*, and how often without that agency,” (Journal for January, 1854, p. 298.) I think myself justified in drawing attention to the grounds on which it was made; and which, I still think, amply sufficient to establish that mode of communication, without, of course, excluding others.

The reason of this strong expression of opinion was, that the case furnished a remarkable example of the evidence which, according to what was formerly stated, a single *positive* fact may afford,—quite of the nature of the *instantia crucis*, when supported by a large body of *negative* observations. The anxious expectation of the disease in the town, in 1832, the careful division of the town into districts, and appointing of stations and medical men to each, and the number, zeal, and intelligence of these observers, were known to be such as to justify our saying, that this was the very *first* case of the disease which ever originated in Edinburgh.

or Leith, in a person who had not left the town; and that for a time it was an *isolated* case, no other appearing for ten days, in a population of above 140,000 persons, many of whom were in circumstances, in all other respects at least, equally favorable to the appearance of Cholera, as this woman was;—as the subsequent appearance of the disease in many of them, during nearly a year that the disease afterwards existed in Edinburgh, proved. If the poison producing this “*nova pestis*,” had no contagious property, this woman was not more exposed to it than any other of this large body of people; but if it had that property—in whatever other way it might be communicated,—she was undeniably and peculiarly exposed, as she was engaged in nursing her son, in a close confined room, who was ill of the symptoms of cholera, during the whole of the day preceding that in which she sickened and died; and he had passed the next preceding night in a house in Musselburgh, where patients in the malignant disease then were, and had been for weeks previously. Here, then, was a fair *instantia crucis*, to determine whether the transmission of the disease, from place to place, known to be at that time a frequent event, was or was not dependent on intercourse of healthy persons, with those previously sick of it; and the affection of this one person, who had that intercourse, contrasted with the non-appearance of the disease in 140,000 was, as I maintain, *decisive* evidence.

Many cases, equally decisive, have since occurred, of which I have been informed, on the *first* appearance of a disease *previously unknown* in a town or district, carefully observed;—*e. g.*, at Arbroath in 1853, where there was clear proof that the two first persons of 15,000 inhabitants of that town, who took Cholera, “had just returned from Dundee, where they had visited persons ill of cholera;” their affection, therefore, proves nothing as to the efficacy of intercourse with the sick, in exciting the disease, rather than merely visiting a particular locality;—but the next *six* who took it in Arbroath,—the *first six* inhabitants of that town who took cholera without leaving the town, had repeated and close intercourse with those already affected before they took it; and the inference as to the contagious property is drawn, not from their taking the disease, nor even from their taking it at that time, and in rapid succession, but from their being *the only inhabitants* of Arbroath who took it, during the first week of its existence in that town;—*i. e.*, the positive evidence of the *six* who were known to be exposed to that cause, is supported by the *negative* evidence of the *fifteen thousand* who could not be shown to be, and the immense majority of whom certainly were not, so exposed.

I have great hopes that we shall soon have statistical evidence to establish a proposition which no other evidence known to us could justify our admitting, but which, if established, would not only reconcile most of the conflicting statements on this subject, but serve as a guide to almost complete security from any epidem-



ics of this disease in future; viz., that the poison of cholera, *like other known animal poisons*, is developed during the decomposition of the animal matter, the appearance of which is most characteristic of the disease,—that which constitutes the “*rice-water stools*,”—but only in a *particular stage* of that decomposition, not immediately after its formation in, or discharge from, the body; and again, not after the decomposition has gone to a certain length. All this can be proved only by Statistics, but is quite susceptible of proof in that way. The last proposition above stated—that no poisonous property is attached to any part of a body dead of cholera, after a certain stage of decomposition has been passed, seems nearly ascertained from the number of instances in which dissecting-rooms have been supplied with bodies of persons dead of cholera, for many weeks together, without any of the students attending them being affected. That the peculiar matter of the cholera evacuations, during its decomposition, perhaps especially in dry air, has a peculiarly poisonous quality, was, I believe, first suspected by Liebig, and partly by the analogy of the poison already mentioned, causing erysipelatous inflammation and puerperal fever,—and also of the *sausage poison*, repeatedly observed on a large scale in Germany, which is developed during a certain stage of the decomposition of the animal matter of those sausages, and disappears when their putrefaction has so far advanced. That the cholera can be communicated to animals by inoculation with this matter, of the peculiar rice-water stools, has been sufficiently proved by the experiments of Dr. Lindsay in this country; and if a few more experiments shall give results similar to those of M. Thiersch, at Munich, I think we may assert that the proposition above stated, is *statistically* proved. “Dr. Thiersch collected the intestinal contents, or the evacuations, of cholera patients, and let them decompose under the influence of air and heat. From day to day he dipped into this matter pieces of filtering paper, which he dried, for subsequent experiments on white mice. Two of these animals at a time were exposed to infection for four days, by having a square inch of the filtering paper, thus prepared, moistened with water and mixed with their food. Each mouse took thus 1-2000th gr. daily. The results were as follows:—The preparations from the matter during the first day of decomposition were *innocuous*. To this succeeded a period of from six to nine days, during which decomposition went on, and preparations from the matter in this second period of decomposition, caused disease in 30 out of 34 animals, and death in 12 of the 34. The symptoms were peculiar and characteristic. The hair fell off, the ears dropped, there was languor, then discharge from the bowels, first of white, then watery matter, the urine lost its smell, then was suppressed, the appetite became *depraved*, so that the animals would fill their stomachs with wool; there was no apparent sickness, but such tonic muscular contractions that they seemed dead some time be-

fore death. On dissection, accumulation of blood in the vessels of the small intestines was invariably found, their contents *watery*, with *abundant epithelial flakes* (just similar to those found in persons dead of cholera); the cortical substance of the kidneys passing into fatty degeneration, the bladder empty, the blood and the contents of the intestines answering to the test of ready mixture with amygdalin, as in the cholera of man,—which will not appear in the healthy animal. To this a third period of decomposition of the matter under trial succeeded, in which these poisonous effects were very slight, or not observed at all.”—(See *Med. Times and Gazette*, Nov. 25, 1854.)

We have already a statement by Dr. Budd, of statistical observations made on villages in England, where the entrance of Cholera appeared to be prevented by such expedients as these observations immediately suggest, for receiving the rice-water evacuations of cholera patients on linen or cotton, and burying or burning, or otherwise effectually destroying their substance, during that period, thus indicated, after they have been passed, and before they have entered on the morbid decomposition; and we have sufficient statistical evidence of the importance of another measure,—which was first adopted, I believe, at Edinburgh, in 1832, and has since been recommended by the Board of Health in London, and adopted in different places, although not so generally or satisfactorily as could be wished,—founded on the merely empirical statements I have made as to the communication of the disease from the sick to the healthy, and its apparent adhesion to particular, often very limited, localities, viz., the establishment of *houses of refuge* for the reception of all inhabitants of houses or rooms which might become infected with cholera in any town; not themselves affected, nor required for the care of the first cases that might occur. Here such persons might be lodged in pure air, regularly fed, preserved from cold and from other (frequently concurrent) exciting causes of the disease, and treated with due attention to cleanliness, immediately on any symptoms of cholera showing themselves. The London Board of Health report, that they had information of 1691 persons taken into these houses of refuge, from rooms where there were patients in cholera, and of these, only 33 became affected with cholera, and only 10 died. In cases of which I was myself informed, in Edinburgh, at Glasgow, and at Oxford, during different epidemics, 1010 persons were admitted from sick rooms into such houses of refuge, of whom 40 took the disease, and 15 died; whereas the experience of Dr. Hamilton of Falkirk, of 251 cases of cholera appearing in 86 houses, where no such means of separation existed, gives only a fair idea of the extent to which successions of cases will often be observed, in confined air and dirty districts, possessing no such resource.

I am happy to say, that so far back as November last, having written to Dr. A. Smith, at the head of the medical department of

the army, on the subject of the decomposition of the rice-water stools, as the probable cause of the propagation of cholera, and of districts becoming *tainted* with the poison of that disease,—I was informed by him that he had directed the attention of the medical officers in the Crimea to the facts now stated, so that if the disease shall appear in a malignant form in that army, we may hope for at least accurate and truly statistical information as to the reality of that opinion.

Again, as to the Yellow fever, so frequently becoming epidemic in the hot climates, although we cannot boast of having acquired information either as to the nature of its cause, the essential character of the morbid change it produces, or the power of any remedy over it,—yet by simply empirical observations, *i. e.*, by Statistics, we have information to the following effect, as stated in reports in Germany and France, on inquiries conducted by order of those governments, on a large scale, and considered by committees containing the names of Humboldt and Dupuytren, that it is a disease *endemic*, almost exclusively, “in districts nearly on the level of the sea, never appearing beyond 48° of north latitude, nor without a previous temperature of 72°,—only in certain circumstances propagated by contagion,” but when epidemic, always *confined strictly to certain localities*; so that the practical rule of immediately evacuating, *i. e.*, removing *all* the inhabitants of places where it is declared to exist, and has formerly prevailed, is *incontestable*, and “of such proved utility, as will always justify its rigorous execution.”

Without dwelling farther on the effects of Malaria, in this or any other climate, which we can only expect to be satisfactorily explained when pathology shall be considerably more advanced than at present, I may merely add, that such collections of facts have been made, and are now frequently repeated, as to the places and circumstances in which it arises from the earth, and the laws according to which it extends and multiplies,—considered merely empirically or statistically,—as we may confidently expect to be successful in disarming this cause of disease likewise of its terrors, long before the nature of the change produced by its action on the living body, or the rationale of any line of treatment of those who may be affected with it, shall become known.

The cure of Epidemic Scurvy, resulting in different cases, as is now satisfactorily established, from different deficiencies in the Diet habitually taken,—the efficacy, therefore, of different kinds of diet in counteracting this form of disease,—still more remarkably, the power of small quantities of vegetable Acids in producing the same effect, and the extraordinary rapidity with which such changes of diet, and these acids, will produce their effect,—may also be stated as examples, on a large scale, and of the most satisfactory kind, of what is generally called the power of Art over a most loathsome and virulent disease,—but in reality must be re-



garded now, and probably long after our time, as results obtained by simply empirical observations of the course of Nature, statistically arranged, fortunately facilitated by so many of the subjects being organised bodies of men;—and which have distinguished the present age to a degree, which those who are not familiar with the medical writings of the last century will hardly conceive.

We have good reason to hope, that inquiries now on foot as to the external causes of Scrofulous, or what is now usually called Tubercular disease, including pulmonary Consumption,—an inquiry which we must perceive to be more complex, and in which the operation of various causes must be recognised,—will be effectual in pointing out the means of counteracting that tendency in a very large proportion of cases of persons liable to it,—simply on the principle of empirical observation, enlarged and arranged in the form of Statistics, long before we shall have information as to the essential nature of the vital process, or mode of operation of the causes in question.

In illustration of this, I need only mention two facts, recently ascertained on so large a scale, that we have no doubt of their truth and importance, and which, even at present, may be said to be guides to successful practice in many cases only recently thought hopeless, although all that was previously known on the subject was certainly rather adverse than favorable to the supposition that they would ever be established. These are,—1. The good effect of the Cod-liver oil—if not of other animal Oils, on many cases of tubercular disease, in their early stage—provided only that it can be retained on the stomach to the extent of an ounce and a half or two ounces daily; and, 2. The almost complete exemption of the inhabitants of the Faro Islands from tubercular disease, notwithstanding that their climate, as regards cold and damp, is exactly that which, in this country, has been thought most favorable to it.—[*Edinburgh Med. and Surg. Journal.*

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*M. Brown-Séquard's Discoveries of the Functions of the Spinal Marrow.*

Seldom has the scientific world been taken more by surprise than when M. Brown-Séquard announced his recent discoveries relative to the functions of the spinal marrow. Whatever may be wanting to complete our knowledge of the action of this portion of the nervous system, the brilliant investigations of Sir Charles Bell seemed to have set at rest forever the question as to the particular fibres which communicate motion to the muscles, and sensation to the brain. The theory of Bell, in a few words, is as follows: “The spinal cord has two functions, relative to the two substances of which it is composed. It serves as an independent organ, detached from the brain, for the performance of reflex actions, a property which it owes to the grey matter contained in

its centre. By the white substance it acts as a medium of communication between the brain and the parts to which the nerves are distributed, the posterior columns conveying sensations *upwards*, and the anterior and lateral columns transmitting the power of motion in a *downward* direction. This theory was less the result of experiments upon living animals, than of a process of reasoning, Sir Charles having always manifested a strong repugnance to vivisections. M. Longet, however, demonstrated, by the application of galvanism to sections of the spinal marrow of animals, that irritation of the posterior columns caused no movement, while that of the anterior columns occasioned no pain. On the contrary the galvanic current caused extreme pain when applied to the posterior columns above the transverse section of the medulla, and excited movements when directed through the anterior columns of the lower segment. The grey matter was found to be insensible to the irritation of electricity. The theory of Bell, so remarkable for its simplicity and apparently so perfectly supported by the demonstrations of one of the most eminent experimental physiologists, could not fail of universal adoption, and although pathological facts were occasionally made known which appeared to contradict, to some extent, its conclusions, it seemed natural to believe that these were inaccurately reported.

It will be observed, that in the experiments of M. Longet, the spinal cord was always completely cut across. We may not unreasonably ask whether the organ thus divided is in the same condition for transmitting sensation and the power of motion, as when its continuity is in a great part preserved, and why this method of experimenting was employed, instead of cutting through each portion in succession, and observing the effect produced upon the function attributed to that part? In reply to the latter inquiry, M. Longet states that the operation of laying bare the spinal marrow, and evacuating the fluid which is contained in the cavity of the arachnoid, is always followed by paralysis, both of sensation and motion, of the posterior extremities, thereby rendering further investigation impossible. Here was the great obstacle to researches in the functions of the spinal cord, and the removal of this obstacle was the first step taken by M. Brown-Séquard. He ascertained that the nervous disturbance following the opening of the spinal canal was caused by the loss of blood and by the pain and shock consequent upon the operation. By operating in such a manner as to prevent a great flow of blood, and by allowing the animal time to recover from the depressing effects of the operation, he found that both sensation and motion returned to the posterior extremities in almost, if not quite, their original degree.

Thus enabled to experiment upon the cord in a normal state (as far as its functions were concerned), he proceeded to isolate various portions of the different columns by sections made with ex-

treme care, and demonstrated a series of laws relative to the spinal functions, the principal of which are the following:

1. The posterior columns may be divided without destruction either of sensation or motion.

2. Sensation and motion are destroyed when the grey substance is cut across.

3. Integrity of the antero-lateral columns does not interfere with the loss of motion, nor does integrity of the posterior columns prevent loss of sensation.

4. Division of the posterior fibres of the cord, so far from abolishing sensation in the parts to which these fibres are distributed, appears, on the contrary, greatly to increase it.

5. When the posterior columns are divided, sensation continues to be transmitted between the lower portion and the grey substance, which transmits the impression to the sensorium by means of fibres descending from the upper portion, and joining obliquely the grey substance below the point where the section is made.

Our limits forbid us to detail the experiments upon which the above conclusions are founded. They have been repeated over and over again with the same results, in the presence of a committee appointed by the *Société de Biologie*, consisting of MM. Claude Bernard, Bouley, Broca, Giraudeau, Goubaux and Vulpian, to whom was referred M. Brown-Séquard's memoir, and who were entirely satisfied with his conclusions. The interesting report which they made to the Society is the most convincing evidence of M. Brown-Séquard's skill as an experimenter and his eminence as a physiologist.—[*Boston Medical and Surg. Journ.*

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*On Chalk Metastases (Kalk Metastasen).* By RUDOLPH VIRCHOW.  
(Virchow's Archiv für Pathologische Anatomie, &c.)

Some years ago Professor Virchow performed the post-mortem of a young lady whose case had thoroughly puzzled all the leading physicians of Berlin. She had complained of pains throughout the body, but these, which were attributed to rheumatism, had resisted all the means employed for its removal. After death numerous and large nodes of cancer were found in almost all the large bones, occupying cavities of a corresponding size in the osseous tissue, and no where rising above the level of the bone. A large quantity of white sandy deposit was found in the calyces and pelvis of the kidneys, and on dividing the lungs considerable deposits of a hard greyish white substance were found, and a similar deposit occupied the mucous membrane of the stomach. The salts which had been absorbed in consequence of the cancerous deposits in the bone appeared to have found a fresh nidus in the kidneys, lungs, and stomach. Professor Virchow has recently met with four similar cases; the following is a brief abstract of the



characteristic features found on cadaveric inspection. It may be premised that in all four there was evidence of recent degenerative nephritis, in the second or third stage of the disease, in that period at which the disturbance of the secretion is greatest; a point upon which Professor Virchow lays great stress, as he attributes the chalky deposit to impeded secretion of the urine. In the first, a maid-servant, aged forty-three, the upper lobe of the left lung exhibited posteriorly a hard spot, the size of a nut, on section yellowish white, dry and friable, which proved to be chalky infiltration. Similar smaller spots were disseminated through the lung. The second case occurred in a girl, aged fifteen, who presented a large mass of sarcoma, which had perforated the temporal bones from without inwards. The right parietal bone was occupied by a similar growth; the posterior part of the inferior lobe of the right lung presented several dense, dry, hard nodes of chalky infiltration. In the third case, a young man of nineteen years, who died of necrosis of the left femur, the mucous membrane of the stomach was found infiltrated with calcareous matter. The fourth case occurred in a man, aged seventy-three, who had labored under a cancrroid affection of the lip, of the clavicles, and several ribs, and died of gangrene of the lung. Here the lungs exhibited, in addition to spots of cancrroid disease and gangrene, dense calcareous infiltration in a part that was very emphysematous, so that the septa of the tissue resembled hard spiculæ, and the inner surface of the pleura was invested with thick deposits. The last three cases resembled that of the young lady in Berlin in regard to the co-existence of extensive bone disease. In the first there was no apparent source from which the lime salts could be derived, but the bones were not especially examined. The chalky infiltration of the mucous membrane of the stomach, which is noted in two cases, deserves a little further attention. In both, the altered parts were altered in appearance and to the touch. They appeared opaque, whitish, more or less spotted, feeling dry and resistant; in the first case observed the tissues crepitated on section. The microscope demonstrated a fine granular deposit (blackish by transmitted, white by reflected, light), external to the follicular structures, which would probably mean that a portion of the glandular tissue had been absorbed to make way for the deposit. Acids dissolved the granules, and caused an evolution of carbonic acid gas; after the application of sulphuric acid, sulphate of lime crystals formed. The co-existence of extensive disease of the bones with extensive ossification of the vessels of the medullary portion of the brain, in the case of a young man aged twenty-six, is also quoted in illustration of the view advocated by Professor Virchow.

Professor Virchow was of opinion that in these cases he had to deal with a direct cretification of the tissues, bearing, as he thinks, very materially upon the doctrine of metastases, on which account

he has selected the title for his paper that we have placed at the head of this notice.—[*British and Foreign Med. Chir. Rev.*]

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*On the Healing of Abscesses by the First Intention.* By M. CHASSAIGNAC.

M. Chassaignac has for some time past endeavoured to unite abscesses by the first intention, after their complete evacuation; and he reports that his success has been very considerable. His method of procedure may be judged of by the narration of a case which recently occurred at the Lariboisière Hospital and was observed by all who attend there. A healthy man, aged 19, was admitted February 17th, presenting all the symptoms of an acute abscess of the axilla, which had been about a week in forming. On the 19th, chloroform having been given, a considerable quantity of well-conditioned pus was discharged by the bistoury, pressure being exercised in all directions for the purpose of securing complete evacuation. The cavity of the abscess was next thoroughly washed out with water introduced through the tube of an irrigator, in order to bring away any remaining pus, the injection being continued until the water returned completely limpid. Pressure was again employed to force out every drop of the water, and the orifice was strapped up. A large pad of charpie was introduced into the axilla in order to make pressure over that region, and the arm was confined in one of Mayor's bandages, as if for fracture of the clavicle. On the 21st cicatrization was complete, no discharge of pus whatever being visible. The bandage was continued as a matter of precaution for two or three days, and then the arm was allowed to hang down, no pain being reproduced. In the site of the abscess a little indurated spot could be felt. On the 27th he was discharged quite well.—[*Gaz. des Hop.*, and *Ib.*]

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*On the Removal of Articular Bodies by the Subcutaneous Section.* By M. CHASSAIGNAC.

The author prefers this designation to that of loose cartilages, as prejudging in nowise the nature of the bodies. In the present paper he relates two cases in which the operation devised by M. Goyraud of Aix was performed with success. This consists in opening the joint by the subcutaneous section, and forcing the articular body through the track of the incision into the cellular tissue, and leaving it there for future removal. The following are the conclusions the observations of these and other cases have induced M. Chassaignac to arrive at: 1. The pain, which is induced by the pinching exerted by the surfaces between which they are compressed, is not felt when the bodies are voluminous. 2. The character of this sudden pain is not pathognomonic, pain quite similar to it accompanying certain invasions of rheumatism or gout,

and the dislocation of the semi-lunar cartilages. 3. Our diagnosis may be at fault from our mistaking the slipping of the fingers over the walls of the articular sac for the displacement of a mobile body—a mistake that may far more easily occur than would be supposed. We have also to distinguish these bodies from partial indurations of the capsule, and from inequalities of the edges of the osseous articular extremities. 4. Among the concomitant affections that may be produced by the presence of these bodies are hydrarthrosis and ankylosis. 5. Although when hydrarthrosis produces great tension it is an obstacle to our diagnostical examination, a moderate repletion of the capsule favours the exploration. 6. The place of election for the operation on the knee-joint is the lower *cul-de-sac* of the synovial membrane on the inner side. 7. Before commencing any operation, small articular bodies must be previously fixed by acupuncture, as there is always great danger of their escaping at the moment of operating. 8. When these bodies are multiple, we should collect them all at one point, so as to expel them by a single operation. Still, where one or two escape us, the operation does not always fail. 9. Articular bodies left under the skin for a considerable period, undergo a great diminution, so that a secondary operation for their removal is not always required. 10. So important is it to avoid suppurative inflammation after the operation, that leeches should be freely applied at the root of the limb, both as a preventive and curative measure. 11. Angioleucitis is the species of inflammation most to be dreaded after operation upon the knee. 12. In expelling the foreign body from the joint, we should endeavour that its course should be made as long as possible, experience showing that in such cases a portion of the track may suppurate with impunity, or at all events without the pus invading the cavity of the joint.

[*Revue Méd. Chirurg.*, and *Id.*

#### *Comparative Value of the Different Hæmostatic Agents.*

A correspondent sends us the following translation, which we publish as conveying valuable information upon an important subject.—[*Boston Med. and Surg. Journal.*

The Gazette des Hopitaux of Sept. 29th, in an article on the comparative value of different substances as means of arresting hæmoptysis, after remarking that bleeding for this purpose has deservedly fallen into general disfavor, alludes to the clinical researches of Dr. Aran, published in the Bulletin Gén. de Thérapeutique, and gives a *résumé* of the interesting and valuable results to which he had arrived. We translate passages which seem to us of considerable value.

M. Aran has successively tried agents belonging to the class of hæmostatics, properly so called, such as resinous substances, the ergot of rye and common salt; then astringents—acetate of lead,



alum, *eau de Rabel*, tannin, and gallic acid; nauseants and emetics—*ipêcac*, tartar emetic, *veratrine*; and sedatives of the circulation—nitre and *digitalis*.

Of the agents belonging to the first group, hæmostatics proper, the essence of turpentine has seemed to M. Aran especially to deserve the attention of physicians. He has prescribed it pure, in doses of from ten to thirty drops, in a glass of water, or made up into a bolus with magnesia, and taken enveloped in moistened wafer (*pain à chanter*). Generally within a few hours after the patient commences taking it, there is a very marked diminution in the amount of the hæmorrhage, and in twenty-four or thirty-six hours at the most, it is reduced to a very small quantity or entirely ceases. On the other hand, M. Aran is convinced, as many English and German physicians have already proved, that the essence of turpentine is less suitable in hæmoptysis, with a tendency to inflammatory action within the chest, a febrile movement, or when it occurs in young or rather plethoric subjects, than when it happens in debilitated, cachectic subjects, with characters of *passivity* or atony.

Ergot of rye and the ergotine of M. Bonjean, have shown much less efficacy against hæmoptysis than essence of turpentine. The former, even, when given in a very large dose, has seemed to exert only the most moderate influence upon the hæmorrhage.

The same is not the case with chloride of sodium or common salt, which has been proved to possess an undoubted efficacy in doses of from sixty to one hundred and fifty grains taken in the course of a few hours in solution, or in the form of powder. It is particularly deserving of recommendation in such cases, as it is constantly at hand.

Among the astringents, M. Aran has found none worthy of confidence except tannin and gallic acid. Gallic acid seems to him preferable to tannin, as, with the same styptic properties, it has not the same drying action upon the tissues, and does not produce the obstinate constipation which occurs when the latter is employed. The medium dose of gallic acid, as he administered it, was, from ten to twelve grains in twenty-four hours, in powders of two grains each, given at intervals of two hours.

M. Aran acknowledges the power of nauseants and emetics to arrest hæmoptysis, such as tartar emetic, *ipêcac* and *veratrine*. With regard to the first two this property has been known for a long time. As for *veratrine*, in three cases in which it has been prescribed, the hæmoptysis was arrested as if by enchantment as soon as nausea and vomiting took place. These agents would deserve, then, to be placed in the first rank of hæmostatics, if there were not others of equal efficacy, which do not produce nausea and vomiting, effects which are always painful or disagreeable to the patient.

Nitre and *digitalis* have been equally, and with good reason,

extolled in this case by the name of sedatives to the circulatory system. Following the example of Schmidtman, who conceived the idea of combining sea salt with digitalis to combat hæmoptysis, M. Aran, for the same purpose, combined digitalis and nitre. This mixture, it appears, produced very remarkable results.

In ordinary cases he gave in the course of twenty-four hours four grains and a half of digitalis and twenty-three grains of nitre in four powders. But when the hemorrhage was very profuse the quantity of nitre was carried as high as thirty-eight grains, and that of digitalis to eight or even twelve grains; in some very grave cases the quantity of digitalis given was carried to twenty-three grains, and of nitre to sixty grains. A remarkable circumstance noticed was, that when these remedies were given in this quantity the system was not affected in any unfavorable manner; the pulse did not suddenly abate in frequency, nor was there a very abundant diuresis. On the other hand, the effect upon the hæmoptysis was most marked; in a few hours the flow of blood was considerably reduced, and often after twenty-four or thirty-six hours there remained only a little bloody expectoration. The diminution of the hemorrhage was generally accompanied by a great calm. Nevertheless M. Aran observed that never, after the administration of essence of nitre and digitalis, was the arrest of hemorrhage so sudden as after the administration of turpentine or gallic acid.

M. Aran sums up his opinion of the respective value of the different agents in question, in the following words:—In profuse hæmoptysis, but not immediately threatening life, the physician may take his choice of either of the preceding remedies. In very profuse hæmoptysis, on the contrary, where it is necessary to arrest the bleeding as soon as possible, and by means the least likely to depress the system, the physician cannot trust the tardy remedies. Neither the ergot, nor sugar of lead, nor *eau de Rabel*, nor alum, nor rhatany, &c., will be equal to the emergency. Only turpentine, gallic acid in a large dose, salt, nitre combined with digitalis, can be employed with success; but the necessity of proportioning the dose of the medicine to the intensity of the hemorrhage, in administering the chloride of sodium, but particularly the nitre and digitalis, is productive of great inconvenience; the danger of too great a depression from too large a dose, or from too long a continuance of the remedy.

"It is then to gallic acid and to turpentine that I give the preference in these grave cases; yet, under the apprehension of their insufficiency, I do not think the physician should limit himself to their use. It is under such circumstances that bandages applied to the limbs, which are very useful in other kinds of hemorrhage, and ice applied to the chest, have saved the life that was in danger, by stopping the hemorrhage for the moment, and allowing the internal remedies to complete the work."

A.

*On Methodical Cauterization of Abnormal Divisions of certain Organs.* By M. JULES CLOQUET.

In two memoirs recently read at the Académie des Sciences, M. Cloquet furnishes some account of his mode of cauterizing fissures and fistulous openings, founded upon the observation of the powerful contractile effects exerted by cicatrical tissues acting at the angles of wounds caused by burns. He adopted it first in the case of *fissure of the velum palati*. The object was not to cauterize the entire extent of the edges of the division, and bring the granulating surfaces into contact by means of sutures and apparatus—a plan long tried, sometimes succeeding, but oftener failing. The caustic is applied over a very limited surface, at the exact angle of the fissure; and, after the cicatrical tissue, which results has had time to produce its retractile effect, the caustic is again applied to the angle of the remainder of the division. The application is repeated again and again, at intervals, so that the fissured parts are thus brought towards each other bit by bit, and united by a series of cauterizations that may be regarded as so many points of successive suture. The operations for this infirmity, devised by Gräfe and Roux, are difficult of execution, and not infrequently fail in success. M. Cloquet first put his plan into execution in a case in which the whole left side of the palate was fissured as a result of syphilitic ulceration. From eighteen to twenty cauterizations with the acid nitrate of mercury sufficed to effect a complete reunion. In another case of congenital fissure, the patient had already been operated upon by Roux's method, but violent coughing had caused the sutures to tear through. Successive cauterizations firmly united one-half of the fissure, with which the patient was satisfied, and refused to persevere. In a third case, M. Nelaton healed a traumatic division by a similar employment of the electric cautery. In 1851, a congenital fissure existing in a child eleven years old, was completely closed after twenty applications. In all these cases the pain was slight, no change had to be imposed in the regimen or mode of life, and no accidents resulted. Even unpractised surgeons may perform so simple an operation without the aid of an assistant. It is slow in the production of its results, but this is one of the conditions of its success, and is of little consequence, as it does not interfere with the business of life. M. Cloquet thinks the actual cautery is the best means to employ, but for patients who dread this the electric cautery may be substituted.

Another affection usually intractable is *recto-vaginal fistula*, and encouraged by the above success, M. Cloquet applied successive cauterization to its management. The index finger, guarded against the heated body, is introduced into the rectum, and, the external parts, being held open, the apex of the fissure is touched by a small cautery, the patient being able to at once get up and pursue her occupations as before. The pain and inconvenience of the





tient died, at intervals of from nine hours to thirty days after the operation, with the exception of one that survived six months.—The causes of death were—in 3 cases, hæmorrhage; in 6, exhaustion; in 4, peritonitis; in 1, gangrene of jejunum; in 1, cholera from indigestion; in 1, erysipelas. It is right to state, that in some cases the author attributes the death to causes independent of the operation. In 7 cases the operation was undertaken under desperate circumstances, and with a view of arresting impending death; 5 of these died; 2 survived.—[*Amer. Journ. Med. Soc.*

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*On Epithelial and Villous Growths.* Py Prof. BRUCH, of Bâle.

The majority of pathologists are at present agreed that cancerous growths are primarily of local origin, and not the result of a cancerous dyscrasia; the proofs are also being multiplied that a transition from non-malignant to malignant growths may take place. Professor Bruch enters into an interesting disquisition on the nature of epithelial and villous growths, with a view to determining their pathological classification. He admits, with Lebert, Schuh, and others, the occurrence of new growths, consisting of cylindrical epithelium, which have hitherto been observed only in parts normally presenting that variety of epithelium, viz., stomach, rectum, collum uteri, male urethra, eye, and fourth ventricle of the brain. Professor Bruch regards epithelial growths as the result of a morbid development of the epithelial investment and epidermis, of the papillary body and of the cutis vera, which he considers to be non-malignant; and he establishes a subcutaneous variety of epithelial growth, which he regards as malignant. "An essential characteristic," he observes, "of epithelioma, papillary, hypertrophy, and epithelial growths generally, is an intimate union and adhesion of the cells, which prevents their extrusion and causes their accumulation.

The villi of the chorion of mammalia are regarded by Professor Bruch as the prototype of all normal and abnormal villous or papillary formations; all being originally formed as simple elevations of the integuments of the surface, and especially of the basement membrane. After reviewing the various forms of villi occurring in the body, he concludes that the growth of the papillary, villous, or fringed formations is an attribute of all the surfaces of the body, and that it is impossible to draw the exact line of demarcation between that which is normal and that which is abnormal. Many warty excrescences, most condylomata, Clarke's cauliflower excrescence of the os uteri, the incipient condition of some villous cancers, are mere varieties of the same thing in different parts of the body. We cannot conclude this brief notice without advertising to an almost unique case observed by the author of the morbid formation of ciliary epithelium. It occurred in a woman aged

forty, who died of phthisis, but had previously suffered from pain in the head, spasmodic action of the right arm, furred sensation of left hand, and burning of the soles of the feet. After death a rounded, well-defined tumour, of the size of a filbert, was found under the cerebellum, attached to the walls of the fourth ventricle. The microscope showed the tumour to be composed of villous prolongations, or pencils of vessels, closely aggregated in a dendritic or foliaceous arrangement. The surface was invested by a layer of cylindrical epithelium, many individual cells of which were recognized as ciliary epithelium. The form and size of the cells, the nature and seat of the nucleus, and the distinct, though naturally immovable, cilia, precluded all doubt as to their character.—[*Vierordt's Archiv. Jahrgang. Brit. and For. Med. Chir. Rev.*

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*Vapor of Iodine in the Treatment of Ophthalmia.* Reported at a Meeting of the Society for Medical Observations, Oct. 15th, 1855. By CALVIN G. PAGE, M. D.

CASE I.—John Williams. Married. Coal-heaver, aged 35—a dispensary patient. First applied to me in March, 1855, for treatment of his eyes. He had partial capsular cataract of one eye, with absence of the crystalline lens, caused by a wound with a pointed arrow, when he was a boy. The lids of both eyes were swollen and everted, and covered with exuberant granulations. There was great intolerance of light, pain and chemosis, with sclerotic and conjunctival injection, and constant lachrymation with some discharge of pus. I commenced using freely the sulphate of copper with cooling applications, and in a fortnight he was able to work a little, which he had not done for four months previously. Dr. H. W. Williams saw him with me about this time. He has been under my care since that time, but the improvement would not progress beyond a certain point, though all means known to me to be used in such cases were applied. His constant exposure to coal dust probably prevented the usual action of remedies. I lost sight of him during the month of August and the early part of September.

About the middle of September he again applied to me, when the condition of the eyes was as follows. The lids of both eyes were somewhat swollen, the inner surfaces were covered with granulations; there was some injection of both conjunctiva and sclerotica, intolerance of light, dimness of vision, and lachrymation with a small amount of pus. All other means having failed, I availed myself of the fact, that iodine, when dissolved in chloroform, evaporates without leaving the stain of iodine, and I determined to apply this vapor to his eyes. I commenced using it on the 20th of September—and continued it daily until the 29th. After two applications the injection about the eyeball disappeared, leaving it in a perfectly normal condition. At the end of eight



days there was a spot near the inner canthus, on the upper lid of each eye, entirely free from granulations. He has been seen seven times since the 28th of September, and the vapor has been applied. The granulations have nearly all disappeared from the upper lids, except at points near the outer angle. There is no intolerance of light, and the dimness of vision has disappeared.

CASE II.—Annie Fowler, aged 11 years, No. 11 Friend st., a dispensary patient, was sent by a benevolent lady to Dr. Reynolds, Sen., who sent her to the Eye and Ear Infirmary, where she was somewhat benefited. She has scrofulous tarsal ophthalmia. Her mother, seeing the benefit to Williams (the patient first mentioned,) requested me to take charge of her. I have applied the vapor eight times. One eye is nearly well, the other very much improved. Both these patients are still under treatment.

The advantages of this method of applying iodine seem to me to be that the effect of the agent is obtained more rapidly and without the usual discoloration. The sensations to the patient are not disagreeable; the effect of smarting, &c., passes away in less than a minute. In applying it to the eyes, the lids should be closed. The vapor seems to penetrate through them. It appears to be applicable wherever iodine is called for, as in scrofulous glands, hydrops articuli, &c. The atmosphere should be excluded from the surface during the application of the vapor.—[*Boston Med. and Surg. Journal.*]

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*Spontaneous Escape of Fluid from the Peritoneal Cavity.* (From the American Medical Monthly.)

MR. EDITOR:—The following case was recently communicated to me by Dr. Wm. Burns, of Littleton, N. H., and I have thought it might prove interesting to the readers of the Monthly.

Mrs. H., of Bethlehem, N. H., was married at the age of 32, having always enjoyed good health. Four years after, she became pregnant, and during pregnancy she became dropsical. It was believed that she had not less than fifty pounds of dropsical fluid in the peritoneal cavity at the end of pregnancy; but all of this escaped *spontaneously, per vaginam*, during and immediately after delivery. This occurred in the year 1791. Two years after the birth of the child (1793,) the peritoneal cavity has again become largely distended with the dropsical accumulation, and Dr. Moore, of Bath, N. H., performed the operation of paracentesis abdominis, removing sixty-four and three-fourths pound of fluid.

During the following twenty-six years, up to 1819, Mrs. H. had filled with dropsical fluid nineteen times, for which she had been tapped six times, and had had *thirteen spontaneous evacuations per vaginam*. At neither of the six tappings had she lost less than sixty-three pounds of fluid; and at each spontaneous evacuation

the fluid had drained off in about forty-eight hours, flowing from the vagina once in two or three minutes. After the water had been removed, either by tapping or spontaneously, the sternum was so prominent relatively, on account of the collapsed state of the abdominal walls, that a common quarto family bible could stand on end in the hollow beneath its lower extremity. The ribs, also were correspondently prominent, and two of them had been broken by the distension.

Dr. Burns tapped the patient, October 21st, 1819, removing twenty-two quarts of fluid, which weighed forty-nine pounds. She was then in the sixty-fifth year of her age, and had been blind four years. She had another spontaneous discharge of the fluid (the fifteenth in all) per vaginam ten months afterwards, August, 1820. At this time more than fifty pounds were supposed to be removed. Not long afterwards she died of some disease not connected with the dropsy.

In this case there is reason to believe that the distension became so great that the wall of the vagina gave way from the downward pressure, at the cul de sac, between this canal and the rectum; and thus the fluid was spontaneously discharged in the course of about forty-eight hours. Afterwards the rupture probably healed by the first intention, and everything remained in the natural state till the tension again produced the same result. And this state of things continued for more than thirty years, without much impairing the general health. The only thing worthy of remark was an occasional attack of vomiting during the last ten or eleven years.

This case illustrates the method adopted by nature in performing the operation of paracentesis abdominis; and I have for some time past been convinced that it is better to imitate the example she has given in this instance, and tap from the vagina, in all cases in which there is such a projection downwards of the cul de sac between it and the rectum as to indicate the precise point where the puncture should be made, and enable the operator thus to make it without risk to any vessel or any neighboring part. A report of a case under my direction, in which this operation had several times been performed, is contained in the American Journal of the Medical Sciences, for January, 1855. In every instance the puncture healed by the first intention, and no unpleasant symptom occurred.

Yours truly,

New York, Dec. 1855.

E. R. PEASLEE.

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*Luxation of the Knee.*

M. Royer communicated to the Imperial Academy of Medicine, 18th Sept. 1855, a case of complete luxation of the knee forward, the tibia mounting many centimetres before and above the articulating surface of the femur, without tearing of the external parts. This luxation was easily reduced by forced flexion of the leg on

the thigh, and a prompt cure was effected. In a month the patient could walk, and in six weeks the cure was completed.—[*Revue de Therap. Med. Chiurg. Medical News and Library.*]

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## EDITORIAL AND MISCELLANEOUS.

*A Manual of the Practice of Medicine.* By GEORGE H. BARLOW, A. M., M. D., Physician to Guy's Hospital, &c., &c. With additions by D. F. CONDIE, M. D., &c., &c. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 607. (For sale by T. Richards & Son.)

To those who are fond of the *multum in parvo*, this work will doubtless prove quite acceptable. It is a very fair condensation of the principles and practice of Medicine. Whether such studies ought to be condensed at all or not, is a question upon which we have repeatedly expressed our opinion. While a manual is well suited to the beginner, those more advanced should not be afraid to encounter more elaborate works which can alone convey a full knowledge of disease. The additions to the work before us, by Dr. Condie, have very materially enhanced its value.

*On the Organic Diseases and Functional Disorders of the Stomach.* By GEORGE BUDD, M.D., F.R.S., Prof. of Medicine in King's College, London, &c., &c. Philadelphia: Blanchard & Lea. 1856. pp. 252. (For sale by T. Richards & Son.)

The profession, already indebted to Prof. Budd for one of the best monographs on diseases of the Liver, will not fail to appreciate the present excellent work on gastric affections. As the stomach is one of the most important organs in the body, and at the same time one very often invaded by disease, any new light or even a compilation of accumulated lore on the subject, must be valuable to every practitioner. The author has accomplished his task in an able manner and shows himself to be a sound observer.

*Proceedings of the American Pharmaceutical Association, at the 4th Annual Meeting, held in New York, in Sept. 1855.*

Among the several Reports presented to the Association, is one on the subject of "Home Adulterations of Drugs," from which we make the following extract:

*Balsam Peru* has been met with, possessing none of the characteristics of genuine balsam except in color and consistency, and upon analysis affording no cinnamic acid.

*Pulv. Capsicum.*—The sample examined had a brick dust color, little pungency, and filled with yellow specks and strong odor of *turmeric*. It was a mixture of turmeric and American capsicum, and, of course, almost inert.



*Castor* is found with the follicles filled with saw dust to half the weight of the castor.

*Opium*.—Since the circular of the Secretary of the Treasury fixing a percentage of morphia for this drug, a more uniform quality has been found in market; but a great many samples have been observed the past season with foreign substances, most commonly lead, inserted in the lumps, in some instances equal to 20 per cent. of the weight of the mass. We are of the opinion that this was done abroad, and probably at the port whence shipped. The different examiners should seek to detect this fraud before passing it.

*Musk* in pod has been observed loaded in the same way, to the amount of 20 grains in a single pod.

*The Essential Oils* are largely adulterated in this country.

*Oil of Peppermint* sometimes contains 50 per cent. of alcohol. *Oil of Rosemary* is adulterated largely with turpentine, and in short, the whole class are shamefully sophisticated.

*Otto of Rose* in the same class.

*Cream of Tartar*, adulterated with carbonate of lime, some samples to the extent of 33 per cent., others in less proportion. Sul. potash is also used for this purpose, and alum largely. Of six specimens examined by a gentleman of New York City, purchased at various shops, but *one* was found pure, some of them being adulterated 30 per cent. The same gentleman says, in reply to our enquiries, that from twenty-two specimens or samples of essential oils, fourteen were found to contain turpentine and other impurities. The same gentleman reports samples of powdered opium adulterated 50 per cent.

*Cod Liver Oil*.—All kinds of fish oil may be found neatly bottled and carefully labelled as the genuine article.

*Sulphate of Quinine*.—Samples have been detected with the old adulteration of mannite, and one gentleman reports quinine mixed up with fine picked raw cotton, adding to the bulk so as to fill the vial without using the requisite quantity of this valuable chemical.

*Ipecacuanha* in powder and *Jalap* in powder, each mixed with spurious matter, and *English rhubarb* in powder, put up for fine powdered Turkey, are not uncommon in all the markets.

Of crude materials, *Nitre*, or *Saltpetre* is one of the most commonly sophisticated, being adulterated with common salt and nitrate of soda largely.

These are some of the reports made to us, all from reliable sources.

The Committee have endeavored to establish points of observation in different sections of the United States, and as far as possible to obtain the names of houses from whom these various sophistications have been obtained. Such information they deem it best to withhold from publication at present, lest they might do injustice to parties ignorantly sending out such drugs; but they also intend from time to time to compare notes, and when satisfied of continued practices of this kind, will report such names to the Association.

In the mean time, they cannot too strongly urge retail apothecaries especially, to be cautious of whom and what quality of medicines they purchase. It is to the dispensing apothecary that medical men and the community look for such medicines as are pure, not only "good of their kind," but of the best kind.

The Association offers the following prizes:

1st.—*Twenty-three volumes of the American Journal of Pharmacy.* For the best Essay which shall develop the commercial history of all drugs indigenous to the United States, as Senega, Spigelia, Serpentina, &c., as regards the manner and places of their collection and preparation for the supply of commerce, the amount annually collected, and the channels through which they enter general commerce.

2nd.—*Six volumes of Gmelin's Hand Book of Chemistry.* For the best Essay on any question relating specially to Pharmacy.

*Committee of Judges.*—Charles Ellis, William Procter, jr.

All Essays contributed for the Prizes must be delivered free of charge to CHARLES ELLIS, Philadelphia, on or before the second Tuesday in August, 1856.

*A Plea for the establishment of Veterinarg Colleges in the United States.*

By JAMES BRYAN, M. D., Prof. of Surgery in Phila. College of Medicine.

This is quite an eloquent appeal to the Agricultural Society of Pennsylvania, in behalf of our domestic animals, who would doubtless vote the learned author a service of plate, if it were as fashionable with them as it is with their masters. Veterinary institutions of learning exist in every country in Europe, and number among their professors some of the first order of talent and scientific acquirements. We see no reason why similar ones should not exist in our country. Boston, we believe, has established one, or is about to do so.

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*The Monthly Stethoscope and Medical Reporter.*—Under this title we find another periodical issued at Richmond, Va., edited by G. A. Wilson, M. D., and R. A. Lewis, M. D. The original "Stethoscope" having been combined with the Virginia Medical and Surgical Journal, the new, or "Monthly Stethoscope" is started for the purpose of continuing the advocacy of the principles and policy of its predecessor. Hoping that the old Dominion may afford sufficient patronage for two respectable medical journals, and that the parties will not deem it advantageous to science to quarrel about their subscription lists, we wish them both success in their enterprise.

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*Deaths from Chloroform.*—Fatal cases of chloroformization continue to multiply. One has lately occurred in Edinburgh, and another more recently in Boston. How many more will the profession, and especially dentists, need to make them more circumspect in the use of this valuable, but dangerous agent?

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*American Medical Association.*—The Ninth Annual Meeting of the American Medical Association will be held in the City of Detroit, Michigan, on Tuesday, May 6th, 1856.

The secretaries of all societies and other bodies entitled to representation in the Association, are requested to forward to the undersigned correct

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lists of their respective delegations, *as soon as they may be appointed*; and it is *earnestly* desired by the Committee of Arrangements, that the appointments be made at as early a period as possible.

The following extracts are from Article 2d of the Constitution:

"Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half this number.

"The Faculty of every regularly constituted Medical College or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital, containing a hundred patients or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution, of good standing, shall have the privilege of sending one delegate.

"Delegates representing the Medical Staff of the United States Army and Navy, shall be appointed by the Chiefs of the Army and Navy Medical Bureau. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers."

The latter clause, in relation to delegates from the army and navy, was adopted as an amendment to the Constitution, at the meeting of the Association held in New York, in May, 1853.

\* \* Medical Journals, &c., please copy.

WILLIAM BRODDIE, M. D., Detroit, Mich.,  
One of the Secretaries.

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*State Medical Society.*—The Seventh Annual Meeting of the Medical Society of the State of Georgia, will be held in the City of Macon, on the 2d Wednesday (9th April) next, and the annual Address will be delivered at 12 o'clock, M., on that day.

D. C. O'KEEFE, M. D.,

Greensboro' March 1st, 1856.

*Recording Sec'y.*

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*Notice to Subscribers.*—The Editors beg leave to say that they have no pecuniary interest whatever in the subscription list of this Journal, and that all communications relating to money matters should therefore be addressed to the publisher, Mr. Jas. McCafferty, who is alone concerned in the management of the financial affairs of the work.

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*On a New Parasite in Man (Pentastomum Denticulatum Rud.)* By Dr. ZENKER, of Dresden.—It was Professor Siebold who first demonstrated from the observations of Drs. Pruner and Bilharz, Physicians in Cairo, the existence of a species of the genus *pentastomum* living in the intestines of man; Siebold gave it the name of *P. constrictum*. The author states that Egypt is not the only country which has the *good fortune* to possess a pentastome; another species, the *pentastomum denticulatum* RUD., which had hitherto been met with only in animals, is found in man; and is even very common in Germany. The author has observed this worm seven times, and always in the same organ, on the superior surface of the liver, under the peritoneum. It is contained in a dense fibrous capsule which adheres to the parenchyma of the liver and to the peritoneum, but which admits of being easily detached; it appears under the form of a little tubercle of from



2.25 to 3.37 millimetres (.0935 to .1326 of an English inch), usually filled with a calcareous deposit with which the animalcule is itself incrustated. The capsule is proportionally very thick, and it is difficult to extract the worm from it uninjured; sometimes, however, the capsule separates easily from the earthy concretion, and the worm can then be withdrawn.

The author gives a detailed description of the animal, and the description is accompanied with figures to exhibit more clearly the form of the worm, and especially that of the tentacula with which the head is furnished.—[*Zeitschrift für Rationelle Medicin and Gaz. Med. de Paris. American Med. Monthly.*]

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*Glass Female Syringes.* By FRANK H. HAMILTON, M. D.—Gradually the old pewter female syringes have gone into disuse, and physicians have substituted the neater, and perhaps, cheaper glass syringes; but the occurrence of several accidents, in some of which my surgical services have been required, induce me to question the value of the substitution.

In three instances I have been called upon to remove from the vagina the broken fragments of these syringes. In one instance the accident occurred in consequence of the sudden alarm of the female while she was using the syringe, and was in no measure, probably, due to the imperfection of the instrument; but in the two other cases the glass gave way from the mere pressure of the fluid while the piston was ascending—the accident, certainly, might occur when the piston fits snugly even though there was no defect in the glass: but if there chances to be the slightest irregularity in the walls of the syringe, or a fissure, such as might easily escape detection, or an unusual tenuity of the round extremity, a fracture would be almost certain to follow. It was this latter circumstance, viz., the extreme thinness of the extremity of the instrument, which occasioned the accident in two of the cases mentioned. Two other cases have been related to me as having occurred in the practice of neighboring physicians, making in all five that have come to my knowledge.

It is probable that no examination, however critical, would enable us to determine, before the fracture has taken place, whether the end of the instrument has a suitable thickness, and it is very likely that a majority of them are blown too thin for safety. I have found the fragments not as thick as my finger nail.

Of late I have, therefore, uniformly recommended either some appropriate metallic instrument, or perhaps more generally the gum elastic bag with an ivory nozzle.—[*Buffalo Med. Journal.*]

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*On the Utility of Decoction of Rhatany in Keratitis.* By Dr. A. QUADRI.—Dr. Quadri observes, that of all the inflammations of the eye, keratitis is one of the most frequent and most obstinate. Experience has proscribed the employment of mineral astringents. Among those of the vegetable kingdom the laudanum formed by the combination of crocus and opium sometimes produces excellent effects; but in scrofulous ophthalmia, which is frequently but a keratitis, it occasionally gives rise to prolonged and mischievous irritation. The author had tried various other substances, as tannin, calumba, &c., without any definite results, when he resorted to rhatany. The experience of six years has convinced him of its value. Its application merely induces a sensation of dryness in the interior of the eye,

and in a short time the pain and photophobia are mitigated, and the weeping is much diminished. When the irritation has thus become calmed in two or three days, the rhatany may be replaced by the more powerful laudanum, more or less diluted. The rhatany is insufficient in the corneitis accompanying blennorrhœal ophthalmia, but in scrofulous and all other forms of keratitis its efficacy is constant. It is prepared by boiling half an ounce of the root in twelve ounces of water, or decoction of elder-flowers, down to half the quantity, and filtering. It should be freshly prepared, and may be used three or four times a day.—[*Annales d'Oculistique. Med. Chir. Rev.*

*Hydrocele.*—At the Clinique of Dr. La Farge, (Gaz. Med. Italiana Toscana,) first surgeon of the hospital Del Greve at Tolosa, it is stated on the authority of Dr. Bellucci, that five cases of hydrocele had been cured by an ointment of digitalis leaves. Dr. La Farge declared that he had cured a hydrocele the size of a pear, in seven weeks, which had been in existence for many months. The ointment is made by uniting one part of the digitalis leaves to five parts of lard.—[*Charleston Med. Journ. and Rev.*

*Female Medical College at Boston.*—This institution, which a stupid Legislature incorporated as a concession to "Woman's Rights," we understand has recently underwent that interesting process called a "blow up;" and Miss Doctor H. M. Gasset has published a pamphlet which implicates the directors in the perpetration of numerous fraudulent transactions, by which the fund that has been raised for the endowment of the Institution has been ignominiously squandered, or rather perhaps, concentrated in wrong pockets. *Sic transit gloria mundi.*—[*Ohio Med. and Surg. Jour.*

*Statistics of Insanity in France.*—From an official document, published by the Minister of Commerce and Agriculture, on the Statistics of France, it appears that there are at present, for every one hundred thousand of the population, 105 persons blind, 82 deaf and dumb, and 125 insane.—[*American Jour. of Insanity.*

*Anæsthetics in the Austrian Army.*—A circular has just been issued, ordering that in future the army medical officers shall always employ, for the purpose of inducing anæsthesia, a mixture consisting of one part chloroform and nine parts ether, this being the proportion long employed by Dr. Weiger, a Vienna dentist.—[*Medical Times and Gaz.*

*Puerperal Convulsions prior to Labour.*—During some recent clinical remarks, M. Paul Dubois observed that it was formerly generally believed, and is so still by many, that in these cases we should induce premature labour. He does not agree to this view, and thinks the practice may even be injurious. It is indeed useless, because labour always comes on of itself, under the influence of convulsion, and it is injurious, by reason of its irritating the uterus, and thus aggravating the convulsions. For the same reasons, he objects to the use of ergot. He employs general bleeding, as far as the strength will permit it, leeches behind the ears, and purgatives. Of these last, calomel and jalap, mixed up with honey, and laid on the tongue every hour until it operates, is the best. Sinapisms should also be

applied to the feet, and ice to the head. The only operation justifiable is the application of the forceps, when the head is engaged in the pelvis, and solely in aid of the last expulsive efforts.—[*Med. Times and Gazette*, from *Gaz. des Hôpitaux*.]

*Sweet Whey in Pertussis*.—Dr. Lowenthal states, as the result of numerous trials, that this substance given several times a day in doses beginning with half a spoonful, cures the disease more rapidly and more pleasantly than any other means.—[*Medical News and Library*.]

*Painless Tooth Extraction without Chloroform. With Observations on Local Anæsthesia by Congelation in General Surgery.* By WALTER BLUNDELL, Surgeon Dentist.—Though written in too party a spirit, Mr. Blundell's tract may be recommended to perusal as containing much interesting matter. Dr. Arnott's proposal to produce temporary annihilation of local sensation by intense cold was at first disregarded; but now almost every day furnishes us with some testimony of its value. We have no doubt the method here proposed will become still more general with respect to the minor and superficial operations, and it may be applicable, for aught we know, in the practice of dentistry. Nevertheless, we shall require far more evidence than at present exists in support of its power of curing (!) cancer, its availability where *deep* incisions have to be made, and its *neverfailing* immunity as respects devitalization, &c., of the tissues to which it is applied. Mr. Blundell has invented a particular apparatus for the production of intense cold, capable of producing it in very limited spots, and such as are difficult of access. Stumps and large molars are removed, according to the author, without the least inconvenience.—[*London Lancet*.]

*Local Anæsthesia*.—We have seen and conversed with Dr. Branch, of Galena, who has called our attention to the following notices, published in the Galena Daily Advertiser, and Weekly Northwestern Gazette. He states further, that he has tested it in nearly two hundred instances, and finds that it more than meets his expectations. He is now in New York, having manufactured the apparatus necessary for its use, which, when completed in sufficient number, will be offered to the profession, together with proper instructions for its use. We have strong hopes it will prove to be all that it promises; we have not witnessed any operation performed under its influence, but from our knowledge of the man and circumstances connected with it, we are led to expect something really useful in connection with it; we are assured that delays in the mechanical portion have prevented a demonstration of its effects in time for us to speak more positively in this number. He says he anticipates that in two weeks he shall be ready to demonstrate its power and offer it to the profession generally.

The editor of the Advertiser says:

*New Anæsthetic Agent*.—The following communication of Dr. Branch, in relation to the application of a new anæsthetic agent, which he has used successfully in preventing pain in dental operations, will attract the attention, certainly of the humane and the suffering. Our personal knowledge of the matter is limited to a particular case, where a friend of ours was relieved, and where the effects appeared to warrant all that is claimed for it by Dr. B., as a uniform rule. From all we know, we are led to hope much



from it. But, it is one of these matters around which doubts cannot long hang, for we conclude that when a man having a tooth pulled, declares that the operation is accompanied by no pain, his testimony should be taken as valid in all charity, though he be not under oath.

*Is it true?—Mr. Editor:—*Will you allow me to answer through your paper the many questions propounded to me in reference to the success of the new agent for producing insensibility to pain, or rather doing away with the pain of dental operations. Those questions are—Is it True? Will it do it? Are you humbugging? &c.

As to the first two questions, I will answer them by quotations from what my patients have said of it. One lady, the first case I used it in, July 27th, said of the extracting of six strongly rooted teeth: "all the suffering experienced was fear that it would hurt."

A little girl six or seven years old, having a large double tooth extracted, though persuaded in every way to tell exactly how it was, asserted and reasserted that "it did not hurt a bit."

Another, a lady, said "I did not know it was out."

Another, a man, who was told if it succeeded he would be charged a fee for its use, if not he would not, (this was a large, long-rooted wisdom tooth,) said when through, "I am perfectly satisfied, and willing to pay the extra fee," and paid it accordingly, notwithstanding he was under no obligations to do so, except on the above conditions, &c. &c.

Those are the facts on which I built my advertisement of its application.

If any wishing operations performed by me, doubt the above, they can have reference to the individuals or their friends.

As for humbug, I wish to live by other means; if this is *humbug*, I hope my patients will always humbug me in the same way, by telling me and others that I don't hurt them when I extract their teeth.

As to its safety, there is no possible chance of doing injury with it, except that which might result from ignorance and carelessness.

As to its discovery, I claim my own compound, apparatus and manner of using it. Also, *as far as I know*, its first successful use in dental operations.

Very respectfully yours,

I. B. BRANCH, *Dentist*,

Galena, August 2, 1855.

No. 85 Main street.

Then follows another of a later date, which says:

"Painful as pulling teeth," will soon cease to be a proverb. The new application of Dr. Branch, in preventing pain in the most difficult cases of tooth-drawing, works like a charm, as far as we are able to learn. A gentleman called on us on Saturday, who had just been relieved by the process, of a deeply rooted grinder, which had become highly inflamed, and like all aching teeth, about "as painful as it could be." He informed us that scarce a twinge of pain attended the extraction. That the application will become universal in such cases, hardly admits of a doubt, and as it is perfectly safe, we do not see why it will not answer a similar benevolent purpose in most cases of surgery.—[*Dental News Letter*.

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## ORIGINAL AND ECLECTIC.

### ARTICLE XI.

*A Thesis on the Detection of Arsenic: presented to the Faculty of the Medical College of Georgia, Feb'ry, 1856.* By H. W. DESSY FORD, one of the successful candidates for the Doctorate.

It may be both instructive and interesting to glance at the marked difference in the position which chemistry now occupies, relative to this particular subject of critical analysis, and that it held at former periods. Instructive, because showing the wide difference between ancient and modern chemistry, and also how rapidly it has developed itself into the form and stature of a perfect science, repudiated many of its theoretical speculations, and fixed itself upon a firm foundation, which the cavils of the skeptic cannot shake. Interesting, because in perusing its literature of the sixteenth and seventeenth centuries, we are forcibly struck by the fact, that when secret and slow poison was first introduced into England, a few true stories of poisoning formed the nucleus of a thousand more, that were the creation of fancy, terror or malignity.

A writer, in speaking of the infant science, says: "It was only natural that the wonders of the new science should excite the terror of the ignorant, and be the subject of numerous exaggerations. The destructive powers of arsenic, furnished a readier theme for the marvel loving, than its powers of healing."

This arsenic was used to so great an extent, as the means for poisoning, that many eminent, learned men, were victimized by

their contemporaries; "no reckoning made, but sent to their account" suddenly by its administration at the hands of their most intimate, ambitious friends.

The science of chemistry was then in such a state, that, although it was called in to aid legal investigations, yet, the world had little confidence in its powers. Then, indeed, the demands upon chemistry asserted themselves, and society called out for some new light, and scientific men were morally bound to work energetically, and faithfully to answer these demands, or else, see their infant, though advancing science, sink into disrepute. These devotees, then, did begin their noble work, with minds which would not flag, though frames would yield. They studied the properties of this newly discovered metal more thoroughly; noticed the different phenomena it presented, under numerous circumstances; perceived its specific effects upon the viscera of living man—in short, all its properties and different phases came to be known. This knowledge, with such minds as Campbell, Gordon, Magendie, and others, was soon acquired, by their diligent research and numberless experiments. Then, if a person supposed to have been poisoned was examined, another all important question arose: What was the specific article?—for there are numerous poisons, animal, mineral and vegetable, each capable of causing death, and marked by its peculiar specific effects.

We perceive, then, that as rapid as the discoveries in the properties and actions of arsenic advanced, the learned Profession of the Law put forth some new questions in legal investigations, which tended to bewilder the physician and chemist, thereby showing that, though he supposed himself in possession of all knowledge of arsenic, in his post-mortem examinations and experiments, yet there were some items wanting to make his testimony complete. The chemist and his science doubtless owe much to the urgent demands which the Law has always pressed upon them. These demands of the Bench have forced the chemist to a rapid advance in methods of detection—as if, unwilling that the rational demands of one of the learned professions should remain unanswered by the other, to its reproach. Instead of being offended by the cavils and objections of a rival profession, they have always used these as arguments rather for more diligent study and research. The result has been the development of methods, by which the most stringent demands of the Law have been fulfilled,



so that this poison can not only be extracted from the organs of the person poisoned, but actually reproduced, free from any trace of organic matter, in its original state of arsenious acid, and of metallic arsenic.

This art of detecting arsenic, we find, has been advanced and perfected by another cause, the strict criticism of the proposed method of one chemist, by many rivals for fame, in the same arena; we must recognize this as one of the causes of progress, even whilst deprecating the extreme rancor and bitterness, which this rivalry has, in many instances, engendered; even the factious objections suggested by this spirit of rivalry, thus degenerated into coarse personality, may not have been without their good fruits. A striking instance of this is furnished by the history of the Laffarge case, in 1840.

The body of M. Laffarge had been examined by three different commissions of chemists, each of which failed to discover evidences of arsenic, to the satisfaction of the tribunal of justice. A fourth commission was conducted by Orfila, and others, and metallic arsenic produced from the organs.

M. Raspail was called by the defence to contest the results obtained by Orfila. Subsequently, in the medical journals, M. Raspail commented on these results, to his disgrace, charging M. Orfila with using materials, known by him to contain arsenic; and with a predetermination to find arsenic: and raising the most frivolous objections—only to give one example—that the arsenic, if found, might have been furnished by the arsenite of copper, coloring a small piece of green paper, found on the top of the grave. In answering these frivolous objections, the whole subject of the reactions of arsenical preparations was most fully again gone over. Most triumphantly did Orfila vindicate himself from all objections, leaving his objectors to the scorn of science, for this base attempt to invalidate his testimony, by ridiculous objections, and to stigmatize the name of such an one—a man endowed with such clean thoughts: “his only talisman being Truth—his only spell-word” Humanity.

This same cause of rivalry, (though more honorable than in the foregoing case,) has furnished us with very many methods of detecting arsenic unequivocally in the dead body, which may contain it.

Having thus cursorily and hastily glanced at some points in the

history of this subject, I shall detail some experiments undertaken, to determine for myself, the relative value of some of the many of these methods. This I was induced to do by the interest awakened in the subject, whilst assisting my father, Professor Ford, in examining the organs of a child, suspected to have been poisoned by arsenic, during the past summer. In these experiments the animal matter used was coarse glue.

First, was prepared a solution of arsenic, of the strength of 1 gr. to  $\frac{3}{8}$  viii. of water.

A. Cold water  $\frac{3}{4}$  xvi. in a capsule,  $\frac{3}{4}$  j. of arsenical solution, equal to  $\frac{1}{4}$  gr. arsenic, four small pieces of copper wire, half inch in length, thoroughly polished, and  $\frac{3}{4}$  j. of muriatic acid. This was boiled for one hour, when the copper wires were taken out, placed in filtering paper, and laid aside for further examination.

B. Glue  $\frac{3}{4}$  ss. in a capsule, with  $\frac{3}{4}$  j. of arsenical solution equal to  $\frac{1}{4}$  gr. arsenic, and  $\frac{3}{4}$  jss. sulphuric acid. This was boiled nearly to dryness, when nitro. mur. acid (nitric acid 3 parts, mur. acid 1 part) enough to moisten it, was added. Then dried by heat. When cool,  $\frac{3}{4}$  vi. of water added—boiled and filtered. Also  $\frac{3}{4}$  iv. water again added to remaining charcoal—boiled and filtered, and added to the above. This was done in order fully to dissolve any arsenical preparation.

C. Glue  $\frac{3}{4}$  ss. in a capsule with water, add  $\frac{3}{4}$  j. of arsenical solution, which was boiled to dryness and scraped from capsule. Nitric acid  $\frac{3}{4}$  x. in a capsule was heated and the above gradually added, and as soon as dissolved, the mass charred instantaneously, without flame, leaving a dry, light charcoal. To this  $\frac{3}{4}$  iv. of water added, boiled and filtered. Charcoal remained in capsule.  $\frac{3}{4}$  iv. of water again added, boiled and filtered. Charcoal still remaining, was boiled in previously filtered solution and filtered, and filtered solutions mixed together.

D. Glue  $\frac{3}{4}$  ss. placed in capsule, with  $\frac{3}{4}$  xvi. water,  $\frac{3}{4}$  j. arsenical solution and  $\frac{3}{4}$  jss. muriatic acid; this was boiled a few minutes to dissolve the glue, and 4 pieces of copper wire, half inch in length, put in, and this boiled for an hour and a half. The wires were placed in filtering paper and laid aside.

$\frac{3}{4}$  xii. water put in Marsh's apparatus,  $\frac{3}{4}$  j. arsenical solution,  $\frac{3}{4}$  jss. sulphuric acid. Metallic spots obtained, but very equivocal.

Solution of C,  $\frac{3}{4}$  vii. put in Marsh's apparatus and  $\frac{3}{4}$  j. sulphuric acid. Four or five spots were obtained in about *thirty* minutes,

having a metallic lustre, though but two were unequivocal. Foam not embarrassing.

After long use of the apparatus, as above, a glass globe, *two* inches in diameter, having a perforated stem *one-eighth* of an inch in diameter and two inches long, was perforated at the point opposite the stem; the stem and the half of the globe, to which the stem was attached, were covered with several folds of cotton cloth. The gas from the apparatus was then inflamed, and the nozzle introduced through the opening in the globe, so that the flame burned about the centre of the globe. This combustion was continued for an hour and a half, the cloth on the outside being kept saturated with water. At the end of the process about 3ss. of fluid was found condensed in the lower part of the globe. To one half of this condensed fluid was added a drop of ammo. sulphate of copper. The result was a decided green precipitate—Scheele's green.

Solution of B, 3 vii. was put in Marsh's apparatus, and 3j. sulphuric acid added. Four or five spots, having a metallic lustre, were obtained, but very faint. Foam was very embarrassing. The above was taken from apparatus, and boiled to disencumber it of sulphate of zinc; again placed in the apparatus, with more of same solution added. The foam was still so embarrassing as to induce abandonment.

The copper wires from A were put into a glass tube, and heated to redness. The film of arsenic, in crystals, was chased by heat into the smaller end of the tube, which part of the tube was crushed. A small quantity of water was added, and this boiled in a small capsule. This process was very unsatisfactory. The copper wires from D were treated as the former; this was as unsuccessful.

The solution of B was boiled in muriatic acid, to get rid of the foam; after which, it was put into a small apparatus, of domestic manufacture. Foam was still embarrassing. It was then put into a capsule, boiled to dryness, and then charred with *nitric acid*. Water was added, and resulting solution was put into apparatus. From this were procured unequivocal arsenical spots. After obtaining these spots, the flame was burnt in a glass globe, as above, for one hour. Took the condensed liquid and tested it with ammo. sulphate of copper. The result was an unequivocal precipitate, though not so decided as of solution C.



Having undertaken these experiments for the purpose of determining the relative value of the methods used, I shall draw my conclusions from these; not presuming to insist upon them, in opposition to any one of expertness in such chemical manipulations, who may have a different opinion, remembering that so much depends, in such investigations, upon that expertness, which practice can alone give. Although many writers and experts have given the preference to the process with *sulphuric* acid, yet I am constrained to believe, that the process with *nitric* acid is the better of the two, and the most reliable of them all. The manner of conducting the experiment is simple, yet exquisitely delicate. Although that part of the glue, treated with sulphuric acid, gave a similar result, in the glass globe, yet it had been treated by nitric acid, to dissolve all the animal matter, and with all was the result not so palpable. Another very essential difference between the two experiments was evident, showing more fully, that the nitric acid is more reliable. The foam was so embarrassing with that treated by sulphuric acid, as to induce abandonment, while that by nitric acid showed, at no time, the slightest indications of this foam. In my notes, where the experiments are enumerated and commented upon, it will be seen that the process with copper wire proved unsatisfactory. This, doubtless, was owing to the coarse manner in which the experiment was conducted—from which circumstance, I am unable to compare that delicate process with the others.

The process with the bulb has certainly much more to recommend it as the most reliable of all processes for detecting, and which doubtless will be considered by all intelligent experts as paramount. In my experiments (even after a long and continued use of the solution in the apparatus, which circumstance tended somewhat to exhaust the arsenic), by burning the flame through the glass globe, and testing the condensed liquid with ammo. sulphate of copper, I procured the decided green precipitate, which fact seems to show, that arsenic may be detected, by this method, in very minute quantities. I did not make the test with ammo. nitrate of silver, which doubtless would have given the peculiar characteristic yellow precipitate, because there was none at hand properly prepared. It may be well to add, that whenever these two precipitates are obtained from the same liquid condensed, the semblance of a doubt of the presence of arsenic is immediately

dissipated; for the uncertainty which attaches to these liquid tests, under ordinary circumstances, will not attach to them in this instance, inasmuch as this liquid being condensed from a burning flame, all animal and vegetable matter must necessarily have been destroyed by that flame. In the process of metallic spots, often they are so feeble, that although the chemist himself may be satisfied with the results of his tests, yet his testimony may often be objected to, either by the counsel for the defence, or the Bench, whereas this process with the bulb would come in as a most perfectly satisfactory one.

From the intricacy of this kind of critical analytic investigation, it may be said, that one of the most difficult and responsible offices of a physician is called in question, when he is required to institute a post-mortem examination, to detect the presence of arsenic in the viscera of the body. Difficult, because it requires the deepest, indeed exacts a most thorough knowledge of Chemistry, without which he must submit to the mortification of displaying his ignorance of that branch of medical science, which is actually necessary that the accomplished and educated physician should possess. Responsible, because in legal investigations, where there is a suspicion of poisoning with arsenic, it often happens that justice will depend on the decision of the expert. From this last fact, then, how noble is that science which can arrive at these conclusions—and in these days with such a degree of certainty;—and what an enviable man he, who can embrace this knowledge to arrest and detect the villainous steps and practices of the homicide. Besides a perfect acquaintance with the laws of Chemistry, and with the difference between the normal and diseased states of the body, a precise and delicate manipulation is also requisite. The precaution of the systematic arrangement of every article used, should always be taken, so as to avoid even the possibility of any accident happening from their misplacement.

## ARTICLE XII.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.  
LETTER NO. 10.

MONTGOMERY, ALA., Feb. 25th, 1856.

*Messrs. Editors*—To say that Calomel is one of the most valuable of the mercurial preparations, and one of the most valuable articles of the *materia medica*, is but to re-assert a truth, which all candid and unprejudiced physicians must acknowledge as having been long since established, upon the accumulated evidence of experience and observation, notwithstanding the unceasing and unmeaning hostility and obloquy which it has encountered, not only from those *out* of the profession, whose ignorance of its properties, and uses, is a sufficient justification for their prejudice and hostility; but from those *of* the profession, who have less justifiable and less creditable grounds for theirs. And though we may never expect to see the time arrive, when ignorance and selfishness will cease to inveigh against its use, we do hope to see the time come when honest and intelligent practitioners everywhere, will rise up as one man, and assert and maintain the honor, dignity, and the independence of the profession, and throw off the ban of proscription, which has been placed upon them by popular prejudice, fostered and encouraged, as it has been, by designing Charlatans. For it is not only disgraceful to the profession at large, but it is exceedingly humiliating to the honest and conscientious members of the profession, to be compelled, in the present enlightened age of the profession, to become *apologists* to popular opinion or professional sentiment, for avowing an advocacy of the use of Calomel, or any other well known and valuable article of the *materia medica*.

Now, as I am addressing myself to the honest, candid, and intelligent portion of the profession, whether the advocates for the use of calomel, or not, I will propound a few questions for their consideration, and ask: What are the properties and uses of Calomel?—what its injurious effects? Are not its injurious effects, more often the result of its rash or injudicious use? Do its powers of injury, even in the hands of recklessness and ignorance, so far outweigh the good which it possesses, when in the hands of the prudent and skillful, as to require that it should be discarded? or, does the possible injury which may sometimes attend its judicious



administration, justify or require an abandonment of its use? And, are there not hundreds of other remedies, which are capable of inflicting far more serious and deadly injury, such as the lancet, drastic and hydragogue cathartics; emetics, mineral and vegetable; lobelia, tobacco, opium, and other narcotics and poisons, against which no hue and cry has been raised or condemnation uttered? To answer these questions properly, and others which would be equally pertinent to the subject, it will be necessary for me to draw upon such authority as will be less likely to be called in question; but before doing so, I will take the liberty of offering my own views, in order that they may have the benefit of the testimony which I shall introduce.

The therapeutic property of Calomel, upon which its great value depends, and indeed, the only one which I have been able to recognize, is its *stimulant* effect upon the secretory, and secerning vessels generally, having a special elective affinity for the salivary glands and the liver, but which may be extended to the other secretory organs, less impressible, by its combination with other remedies having such a tendency and direction. Calomel is unquestionably purgative, in the common acceptation of the term; but as such, its purgative effects are consequential to its stimulant action upon the secretory and excretory vessels, and ducts of the liver, and as the "*sine qua non*" to such action, it must *first* be taken into the general circulation, and as this result must depend in a great measure upon the state and condition of the absorbent vessels, so its purgative effects will depend upon the quantity and quality of the secretions which it causes the liver to throw out, which, sometimes being abundant and acrid, give rise to griping pains, and active vomiting and purging, which have too often been ascribed to the direct purgative and irritating effects of calomel. But my experience is, that calomel in the stomach and bowels, *unabsorbed*, is just about as inert and as unoffending as so much chalk; and that it is not only *unirritating*, but is one of the mildest and most soothing applications to an inflamed or irritable surface; and acting upon such a belief, I have often succeeded in obtaining the very best effects of calomel, by putting a sudden and effectual stop to obstinate vomiting, which had resisted the action of all other remedies.

In some of my former letters, I have endeavored to show the influence of atmospheric heat, and other causes, tending to render

the liver torpid, inactive, and liable to congestion; and I have also shown, or called attention, at least, to the anatomical and physiological relations which the liver sustains to all the other abdominal viscera through the portal system of veins, which it is necessary should be kept in view, in order that we may have a better understanding of the action of calomel upon the liver, and its value and importance as a remedy for the deranged conditions of that organ, and all the organs connected with, and dependent upon it.

I will first notice some of the peculiarities of calomel, in what is recognized as its purgative action, and then its constitutional and alterative effects.

The absorption of calomel when taken into the stomach, is effected *chiefly* by the radicles of the gastric branch and the superior mesenteric branch of the portal vein, and this function is interrupted always, and even suspended, when these vessels become extensively congested, and in cases of high gastro-duodenal irritation, which is often the result of such congestion. In such a condition of things, a certain amount only will be absorbed, before it passes the reach of the principal absorbents, however much may be administered; hence it is, that, in certain diseases and conditions, large doses of calomel will pass through the entire alimentary canal, without making the slightest perceptible impression, or undergoing any change whatever; and hence it is, that large doses do not purge as much, in proportion to the dose, as smaller ones, even when the absorbents are more active, for as soon as sufficient has been absorbed to excite the liver to throw off its secretions, the residue will be soon carried beyond the reach of the absorbents, and become inert: hence the necessity, even in large doses, of combining with it opium, to prevent its too rapid passage, and thus secure its action upon the liver; or what, perhaps, is sometimes better, a repetition of the dose.\* The usual effect of

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\* A few years ago I was called to see a man, some twenty-five or thirty years of age, who had been treated some short time before for what his physician called *Rheumatic fever*, which was accompanied with an obstinate diarrhea, and which, though he had recovered so far as to be able to go about, had never been arrested. When I visited him he had been in bed two or three days, and was in the following condition:—His countenance sallow, and hypochratic; his eyes wandering, with a vacant expression; delirium; picking at the bed-clothes, and catching at imaginary objects; jerking of the tendons. The skin hot and dry, and the pulse 140 to 150, when he was at all excited, small and wiry; the tongue dry, with a dark fur in the

a full purgative, or a large dose of calomel, (by which I mean from twenty-five to thirty grains and upwards,) is to produce, after a few hours, one, two, and sometimes three, full and free fecal and bilious evacuations, when its purgative effects will cease for some hours, when it will re-commence in small and frequent and more bilious evacuations, which, though they evince the best action upon the secretory function of the liver, require to be checked at once by the use of opium, in order to prevent hypercatharsis and the consequences attending it, even though it should be necessary to re-establish its action by its re-administration, which is sometimes the case; but more often the action will return upon the subsidence

centre, and the edges red and shining. The urine scant, and frequent serous discharges from the bowels.

A review of all the circumstances of the case, led me to the conclusion that his safety depended upon the favorable action of *calomel*; and if I had then been acquainted with Dr. Jno. Reid's method of treating typhoid fevers with *small and oft-repeated* doses, "so as to change (as he says) the existing deranged condition of the biliary organs, and gastro-enteric mucous membrane," I perhaps might have adopted it; but as it was, being desirous of making an early impression, I chose twenty grain doses, to two grains, and accordingly portioned four powders of twenty grains each of calomel, and directed one to be given every four hours, which was strictly carried out. On the second day, perceiving little or no change, I left four other powders of twenty grains each, to be given as before, and so on for six days, making in all 480 grains, or just  $\frac{3}{4}$  of calomel. On the third day there was very little change—the pulse was less frequent, and had some more volume; the discharges less frequent and a little more consistent, or less liquid. On the fourth day there were evident signs of improvement—the pulse 130; tongue not so dry; less purging and less delirium. On the fifth day the pulse was from 115 to 120, fuller and softer; tongue and skin more moist; discharges reduced to two or three, leaden or slate color; can be aroused to consciousness, but still slight delirium. Sixth day: has had one discharge, slate color, but more consistent; pulse about 100; almost, or quite rational, and other symptoms in proportion. Ordered a dose of castor oil to be given four hours after the last powder, which was given. Seventh day: pulse full and soft, at about 90; all traces of delirium and subsultus tendinum gone; tongue moist, and cleaning off; skin moist, pleasant and natural; countenance clear and cheerful; has had one large black or tar-colored bilious discharge from the bowels, and one smaller, which was less so; had some desire to take food, which I allowed, and directed, in case of any more purging, to give a teaspoonful or two of paretoric. Eighth day: called to see what *damage* had been done—found him fully convalescent, without the slightest trace of salivation, and I turned him over to the cook.

In about ten days he called at my office and introduced himself, (I did not know him,) paid his bill, thanked me for my services, and said that he never had a dose of medicine to do him as much good as the *one* I had given him, as it had cured him of a very troublesome bowel complaint, and he felt as well as ever he had done in his life.



of the restraining effects of the opium, with less tendency to hypercatharsis. For the cathartic, or rather the purgative action of calomel on the liver, the *larger* are the *safer* doses, for the reason already stated, that a certain amount only will be taken up, and when the impression is more suddenly made, is more apt to excite the excretory vessels and ducts, and cause them to be relieved at once of their *biliary* engorgement; hence the *large*, but *few*, bilious evacuations which follow its action in *full* purgative doses. By using calomel in this mode, a double object is obtained, namely, relieving the liver of biliary engorgement, and establishing the biliary secretion, thus obviating the necessity for a continuance of its use, and diminishing the risk of producing salivation, an occurrence which is generally a matter of temporary inconvenience and discomfort, and of trivial consequence and importance, compared with its great value in other respects.

There can be no doubt that mercury, *slowly* and *gradually* introduced into the system, has a tendency more directly to the salivary glands, and that endermically, and otherwise, slowly introduced, it may excite salivation, without materially or perceptibly exciting the secretory functions of the liver. Owing to this tendency, the introduction of calomel by *small* and *repeated* doses, often fails in producing its proper purgative effect; that is, it fails to disgorge the liver of its bilious contents, unless by the slow, tedious, disagreeable, painful, and dangerous process of *washing* them out by a bilious diarrhea, and often fails to establish perfectly the secretory function of the liver, notwithstanding the existence of salivation, which often occurs as the consequence of such a mode of administration. In such a condition of things, when salivation has been induced by repeated small doses of calomel, and the liver remains unimpressed, which is not unfrequently the case, the very best effects of calomel may be obtained by its administration in a full purgative dose, which will have the effect of relieving the liver of its engorgement, establishing the biliary secretion, and relieving the salivation. This idea may perhaps be horrifying to the uninitiated, but it is nevertheless true, as I shall show by the relation of cases illustrative of this, and other important points connected with the subject.

With respect to salivation, I must say, that without being insensible or indifferent to its occurrence, I have never attached much importance to it, either for its *good* or *bad* consequences, for

the reason, that the salivary glands are not implicated and do not require the action of calomel in those malignant affections in which it is most serviceable on account of its action on the liver, and other dependent and important organs; and the existence of salivation does not, by any means, furnish evidence, conclusive, that those organs have been, or will be, impressed by it. And as to its injurious effects, my seeming indifference, no doubt, grows out of confidence, as I can truly say, that for the quantity of calomel which I have used during thirty years of practice, (which the reader may suppose has been no little,) I have salivated comparatively very few patients, and have never had one to suffer permanent injury, or any thing more than temporary inconvenience; and these favorable results I must ascribe, in a great measure, to the liberal manner in which I have used it, from having been early impressed with a similar idea respecting the action of calomel, that—

“Tender handed, stroke a nettle,  
And it stings you for your pains;  
Grasp it like a man of mettle,  
And it soft as silk remains.”

And having acted upon it, I can boast of having generally obtained the best effects of calomel, without the bad; and all the regrets which I have ever had in connection with its use have been from the restraints imposed upon me, by the unreasonable opposition and unfounded objection to its use, by the patient or his friends, in cases in which it was absolutely and imperatively demanded.

Having said sufficient for the present upon my own authority, I will now introduce such testimony as will corroborate my views, at least as to the *value* of calomel; and the first is the U. S. Dispensatory, by Wood & Bache, from which I will select such passages and make such comments as may seem best suited to my purposes, (referring the reader to the entire article for perusal.) Dr. Wood, who seems to have penned the article upon the properties and uses of calomel, says: “Whether the object is to bring the system under the general influence of mercury, or to produce its alterative action upon the hepatic or other secretory functions, calomel, on account both of its *certainly and mildness* is preferred to all other preparations, with the single exception of blue pill.” “As a *purgative*, calomel owes its chief value to its tendency to

the liver, the secretory function of which it *powerfully stimulates*. It is usually slow and somewhat uncertain in its cathartic effect, and though *itself* but *slightly irritating*, sometimes occasions severe griping pain, with bilious vomiting, *attributable to the acrid character of the bile* which it causes the liver to secrete. It is *peculiarly useful* in the commencement of bilious fevers, in hepatitis, jaundice, bilious and painter's colic, dysentery, especially that of tropical climates, and *all other affections attended with congestion of the portal system, or torpidity of the hepatic vessels.*" Now, it does appear, to my mind, that this evidence is sufficiently clear and pointed in favor of the uses of calomel (particularly as a purgative) in the diseases of our climate, and the South generally, whose chief (if not essential) characteristic features are biliary derangements and complications, to convince any one of its value, who is not entirely carried away by his prejudices. But while I am laboring to prove the uses and value of calomel in such affections, it seems to be equally necessary and incumbent upon me to prove, that "congestion of the portal system, or torpidity of the hepatic vessels," really constitutes any part or parcel of our malignant fevers, and other diseases of like character, which it has become *fashionable* for the opponents of the use of calomel to deny, which I can regard in no other light, than as a hollow subterfuge and a flimsy pretext for their opposition. Of this, I shall say something more hereafter, and so will proceed with my extracts.

"In large doses, calomel is supposed, by some, to act directly as a sedative, and with this view has been given in yellow and malignant bilious fevers, violent dysentery, malignant cholera, &c. The quantities which have been administered in such affections, with asserted impunity, and even advantage, are almost incredible. A common dose is one or two scruples, repeated every half hour or hour, or less frequently, according to the circumstances of the case. We have had no experience in this mode of administering calomel." So says our author, but I have had considerable, as the reader may suppose, by reference to the case reported in a note to this letter.

But this case, though it presents several important and valuable points connected with the use of calomel, is not to be taken as an example of my ordinary mode of using it, as in this case, three or four times the quantity was used, to what I have had to use in any other case; for though my common dose is from one to two scru-



ples, and sometimes drachms, I seldom have them to repeat often. With regard to the sedative action of calomel in large doses, I can say this, that if the term sedative is used in the sense of some writers, *to allay irritation*, as a *local* remedy, I can testify most positively; but if used in the common acceptation of the term, to reduce the vital forces of the general system, and diminish the action of the heart and arteries, I have never observed any such action. In proof of the non-irritant properties of calomel, whether sedative or not, the following testimony, furnished by a note to Dr. Williams' Principles of Medicine, is very satisfactory; it is this: "He who is familiar with the effects of mercury, calomel, for instance, in common disordered digestion, with some febrile irritation, and in *gastritis, cholera and dysentery*, can hardly deny its *soothing and sedative* operation, fully as manifest as, and in some of these cases, *more procurable* than from opium. Its constitutional effects, *short of ptyalism*, are often sedative and enfeebling in the extreme." Now, the constitutional effects spoken of in the last sentence, which I have often observed to an extent requiring the use of opium and brandy, I have been in the habit of regarding as an evidence of the best effects of calomel upon the functions of the liver. That these sedative and enfeebling effects are the result of the passage of the pent-up products of the liver, through the intestines, which being thrown off, these effects subside, generally leaving the system under the constitutional effects, "short of ptyalism." And Dr. Williams himself says, "This remedy (calomel) has no further *sedative* effects than those which proceed from its action on the intestinal canal," which can have reference only to its *local* effects, or its sedative effects as a purgative, in the manner before stated. But let us go on with the Dispensatory: "When the stomach or bowels are very irritable, as in cholera and diarrhœa, from an eighth to a quarter of a grain may be given every hour or two." With a view to salivation, the dose is from half a grain to a grain three or four times a day, &c. "As a purgative, from five to fifteen grains, or more may be given. Calomel has the peculiarity that its cathartic action is *not increased* in proportion to the dose, and *enormous quantities* have sometimes been given *with impunity*. In yellow fever, tropical dysentery, &c., from twenty grains to a drachm have been given, and repeated at short intervals, without producing hypercatharsis (see note); but this practice is justifiable only in cases of extreme urgency, in which the constitutional ac-

tion of mercury, as well as purgation, is indicated. For children, larger doses are generally required, in proportion, than for adults."

Now, my experience is, that in cases of irritable stomach and bowels, and it is necessary to use calomel, the large doses are preferable, for the reasons already given. As an alterative, in chronic cases, where the action of mercury is desirable, there can be no question that its gradual introduction by small and frequently repeated doses, is the most certain (if not the most speedy) method for exciting salivation; or, if it is desirable to procure its antiphlogistic effects, by the power which it is believed to possess of diminishing the quantity of fibrin in the blood, and of removing the deposits of lymph and other products of inflammation, for which properties it is held in most repute in Northern latitudes, the objects will no doubt be obtained by such a mode of its administration. But it is a very different affair with the acute and malignant forms of disease in the South, in which there is supposed to be rather a deficiency of fibrin than otherwise, and consequently no such action of mercury is required, or if it was, they are often so rapid in their progress, that the patient dies before the inflammation has time to kill him, an expression which will be explained, if it is not now understood.

Although such cases are uncontrollable by calomel, in what are termed alterative and salivating doses, from the want of time, if nothing else, I have generally found the most malignant of them amenable to large doses of calomel, when it was used *before* the nervous system had become too much depressed, or before the healthy or sound constitution of the blood had been broken down, not, however, from the power of calomel directly to raise excitement and increase the general vital forces, or to change suddenly the constitution of the blood, but from its certain tendency to the liver, the secretory function of which it powerfully stimulates, whereby "*the congestion of the portal system, and the torpidity of the hepatic vessels*" are removed, dependent and congested, irritated and inflamed organs, relieved and restored to the performance of their functions of absorption, secretion, excretion, &c., whereby the effete and poisonous matters which have accumulated in the system in consequence of those suspended functions, are thrown off, and continue to be, as fast as they are eliminated, thus preventing the depravity and breaking down the constitution of the blood, and consequent prostration of nervous power, which gives such

malignancy to the diseases in question, and often, as I have said, destroys life, before any process of inflammation could accomplish it.

In confirmation of my views respecting the part which the liver plays in the malignant diseases of warm climates on account of the congestion and suspended functions to which it is liable, as well as the value which attaches to calomel in the treatment of those diseases, on account of the certainty with which it acts upon that organ, and others that stand in intimate relation, nothing could be more satisfactory or conclusive than is to be found in a few sentences in "Wood's Practice of Medicine," where this distinguished author, speaking of the treatment of dysentery, says: "But another important object in the use of purgatives is to *unload the portal veins*. The capillary circulation in the liver is often sluggish, and in many instances the secretion of bile appears to be suspended. Blood, therefore, accumulates in the veins, proceeding from the abdominal viscera, and must *press injuriously* upon the capillaries of the bowels. *By stimulating the hepatic circulation and secretion, we remove this evil. Hence one great advantage of calomel.*" Here I would stop, if the next sentence did not contain an important fact for which I have contended respecting the action of calomel, which applies not more to dysentery than to other diseases: "This is indeed one of the most useful cathartics in dysentery, having the advantage of *mildness in its action on the mucous membrane*, while it *excites the liver*." But the consequences of such a condition of the liver are not less injurious, or is calomel less efficient in diseases of the stomach and smaller bowels, the spleen and pancreas, and the liver itself, all of which are in closer proximity and as likely to be effected by *pressure* from the distended portal veins, which it is important to *unload* as in dysentery. It is not, however, the congested condition alone of the liver which gives to *our* diseases the character of their greatest malignancy, but it is the consequences of the suspended secretions which usually attend that condition, but which may exist without the congestion, which generally gives to *our* diseases their dangerous and too often fatal character, by poisoning and breaking down the constitution of the blood from the non-elimination of the impurities generated in the system, as is the case in *our* worse forms of bilious remittent fever, yellow fever, dysentery, pneumonia, &c.—and in all of which calomel is not less prompt and certain (if properly used) in



restoring the suspended secretions, than in *unloading the portal veins*. But the beneficial effects of calomel upon the liver are not confined to the chylipoietic viscera, especially so far as concerns the restoration of the secretions. Dr. Chas. I. B. Williams tells us that (p. 243)—“The congested state of most organs, which occurs when the respiratory process is imperfect, renders necessary remedies suited to remove this state. The lungs, the brain, and the liver, suffer most. *The best remedies in these cases are mercurial*, and other remedies which act freely on the secretions. Probably these remedies act in part by making the liver assist the lungs in the office of *decarbonizing* the blood. The speedy relief afforded to dyspnœa by a bilious diarrhœa, has several times seemed to me to countenance this notion.” Now, what Dr. Williams here states as “probable,” I know to be positively true; for having myself been afflicted for more than twenty years with asthma, I have never failed of being relieved very soon by the occurrence of a bilious diarrhea, which often comes to my relief, and puts a stop to a violent paroxysm. And who is there, who has had any experience in the treatment of bilious or congestive pneumonia, that has not seen the most prompt and decided relief from free, bilious purging, from the use of calomel? Indeed I can say, to the best of my recollection, I have never lost a patient with pneumonia, where such a result was early obtained; and, in this disease (in cases attended with torpor and congestion of the liver), I have always regarded calomel in the light of a *life-preserving*, if not a disease-curing remedy.

As the space allotted to my letters will not allow me to go on, having already reached the usual length, and having a desire to say something more upon the subject, and to present a few cases illustrative and confirmatory of my views respecting the uses of calomel, I will stop for the present, and resume the subject in my next letter.

Remaining yours, as usual,

SAML. D. HOLT..

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ARTICLE XIII.

*Lithotrity in the Female.* By L. A. DUGAS, M. D., &c.

Since the perfection of the instruments for crushing stones in the bladder, and the extension of their use, there must be but few surgeons who would consider themselves excusable for resorting to the knife in calculous affections of females, unless circumstances

of a peculiar character rendered lithotrity impracticable, which is very rare. Indeed, the shortness and great dilatability of the female urethra, very materially facilitate the introduction of the lithotrite and the manipulations subsequently necessary to the seizure and crushing of the stone; so that the cases in which this operation cannot be performed are infinitely more rare in females than in the other sex.

In May last, (1855) Miss E. H., about 8 years of age, was placed under my charge. She had been a sufferer with stone from her infancy, and was in a truly deplorable state when she arrived here. Very much emaciated, sallow and hectic, she suffered excruciating paroxysms of pain almost every half hour, during which her screams were heart-rending to her friends. Incontinence of urine and prolapsus ani added to her discomforts. Upon endeavoring to sound her, the slightest contact of the instrument with the orifice of the urethra would bring on a paroxysm of pain. Under these circumstances, she was placed under the influence of concentrated chloric ether, and a careful examination was made without difficulty. This confirmed her own belief, by revealing the existence in the bladder of two calculi, which could be felt by placing the instrument between them so that they could be stricken alternately by inclining the blades to one side and to the other.

A week was consumed in quieting and preparing her for the operation, and on the 29th of May, in the presence of several professional brethren, having secured the limbs with bonds, as for lithotomy, and administered the chloric ether by inhalation, a calculus of one inch and a quarter in diameter was seized and crushed. The crushing was done five times at this sitting.

7th June. Has had no severe paroxysm of pain since the operation. Has passed a large number of fragments, say about a teaspoonful. Has had cholera-morbus twice from improper food, which reduced her very much. The crushing was this day repeated six times, the largest stone seized measuring one inch and the smallest half an inch in diameter. The etherization was only partial, as she conversed during the operation, but felt no pain.

14th June. Has passed a quantity of fragments, most of which were lost in the alvine discharges, which became frequent and dysenteric, attended with a great deal of fever and some cough. An attempt was made to operate to-day, but she was so much exhausted that it was not completed; yet the bladder did not partake of

the general disturbance, and her paroxysms of pain had pretty much ceased.

21st June. Finding her health pretty much improved, the crushing was done to-day six times without inconvenience; the fragments seized were all small.

26th June. Passed fragments and detritus for two or three days after the last operation, but none for a few days past. Introduced the lithotrite to-day, but could find no calculus.

29th June. Explored the bladder carefully with the lithotrite—and finding no vestige of stone, discharged the case. The patient returned home in a few days—and has ever since enjoyed fine health, as I have been recently informed by the family physician.

The history of this case illustrates the happy influence of anæsthesia in such operations, for the apprehensions of the little patient and her excessive nervous susceptibilities were such that it would have been utterly impossible to operate without it. The chloric ether was therefore used at each sitting. Bonds were used to prevent accident.

The calculi were composed of ammonio-magnesian phosphate of lime.

Augusta, Ga., 1st March, 1856.

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*Remarks on Uterine Affections, based on the Discussions of 1849 and 1854 at the Academy of Medicine of Paris.* By CAMILLE MELCHIOR GIBERT, Physician to the Hospital St. Louis, Secretary of the Academy of Medicine, etc., etc. (Translated from La Revue Médicale.)

Twenty years ago, Lisfranc adopted and extended a theory already abandoned by his master Dupuytren, by attributing to *Chronic Metritis* every symptom peculiar to woman almost, and making this morbid state the starting-point and origin of cancerous affections of the womb. It was an easy matter, consequently, for Lisfranc, to prevent malignant uterine disease, or even to arrest it in its early stages.

The popular applause with which his lectures were greeted, and the crowd of terrified women which sought at his hand the cure of diseases that others had rightly pronounced incurable, turned Lisfranc's head. He carried a list of his achievements to the Institute. He had the temerity to ask for the chair of Dupuytren, and the Monthyon Prize. He declared that amputation of the neck of the uterus, as the prophylactic or curative treatment of cancer, was one of the most brilliant conquests of modern surgery.



Two years had scarcely elapsed, after the presentation of this academic memoir,\* when another surgeon, a pupil of Lisfranc, and an assiduous and impartial witness of his practice, struck down the pretensions of the great operator, in a book which made a great sensation in its day. I will leave the ashes of the dead in peace, and refer the curious reader to M. Pauly's work † for details of that scandalous episode in modern surgical history. I will only mention here, that Lisfranc himself abandoned his *brilliant* operation soon afterwards, that he withdrew his memoir to the Institute, and that he never replied to Dr. Pauly's work.

Still the surgeon of La Pitie continued, in his lectures and practice, to base the special pathology of women on Chronic Metritis and its results: granulations, engorgements, ulcerations of the neck, congestions of the body of the uterus.

In 1837, when I first endeavoured to convince practitioners by a multitude of clinical facts, ‡ of the abuses which had been brought about by a theory based on an application to uterine diseases of the system of Broussais, attention was especially directed to *ulcerations of the cervix uteri*, and it was this lesion more particularly that was supposed to be prevented or cured by various topical remedies, especially by repeated cauterizations.

I do not hesitate to reproduce here the plain language which a just indignation then extorted from me; for these are all matters of history:

"It is sad to reflect that in the era of industrialism and moral degradation in which we live, some men of real attainments, who occupy stations which command the public confidence, do not fear to descend to the level of those healers of *ulcers* and *the whites*, whose putrescent advertisements sully the columns of the public journals, or offend the public morality in street-corner placards."

"There are to-day, in this capital, a multitude of lazy or hysterical women confined to bed, subjected to a useless regimen, and wrongfully harassed by explorations, caustic-applications, or operations designed to cure diseases *which have no existence!*"

I will recall also as a starting-point in any discussion as to the value of the uterine lesions revealed by speculum-examinations, two assertions that I advanced in the Academy without a word of contradiction.

1. The different alterations and variations in colour, size, form, texture, and position of the neck of the uterus, which certain surgeons have incorrectly regarded as the origin and exclusive cause of a multitude of morbid symptoms, may exist, and be clearly ascertained to exist by the *touch* and

\* In 1834.

† *Maladies de l'uterus, d'après les leçons cliniques de M. Lisfranc, faites à l'hôpital de la Pitie.* Par H. Pauly, ex premier professeur de M. Lisfranc, etc., Paris, 1836, 1 vol. 8vo. Germer Baillière.

‡ *Mémoire sur les ulcérations du col de la matrice, et les abus du speculum uteri.* Revue Médicale. Dec. 1837.

speculum-examination, without giving rise to any of those symptoms which have been ascribed to them.

2. That the symptoms which Lisfranc, in particular considered the necessary concomitants of *uterine engorgement* (as others, at the present day attribute them to *uterine deviations*) are observed in cases in which nothing is found of those local alterations that are supposed to be their source.\*

So that it is demonstrated, to my satisfaction at least, that on the one hand, these material lesions are far less important than has been asserted; that sometimes, indeed, their existence produces no inconvenience: and, on the other hand, that the various pains, the local discomfort, the nervous sufferings, observed in many women condemned to Lisfranc's treatment, should be referred to a very different cause from the one which was thought to indicate the necessity for that sort of practice.

In Dr. Pauly's book may be learned the extent to which errors in diagnosis and abuses in practice were carried in those days. The neck of the uterus was not unfrequently amputated when perfectly healthy, and the appearances due to incipient pregnancy were mistaken for morbid lesions!

And it must not be fondly thought that in our day, when Lisfranc's treatment is no longer popular, that these errors are not committed. Although the majority of surgeons have been brought to confess that ulcerations of the cervix are commonly mere temporary alterations, connected with uterine catarrh, and of little importance in themselves, they still treat these unimportant lesions by applications of caustic, and not unfrequently some of the most eminent of their number have pronounced women affected with *ulcers of the womb*, (and what alarm this phrase excites in patients' minds!) whose wombs were not ulcerated at all, but simply presented at the os tincæ a redness caused by an uterine discharge and following its phases, or even a permanent scar, or spot, such as is left occasionally after the process of parturition.

It cannot be repeated too often that the uterine lesions revealed by the speculum depend on two principal causes: 1. Syphilis (primary and consecutive venereal ulcers, depressed and circumscribed granulations of the cervix, the lesions resulting from blennorrhagia;) 2. Uterine catarrh or leucorrhœa, which may accidentally be accompanied by redness, irregular granulations, superficial erosions, passive congestions of the neck, engorgements, etc. In the latter group there are two important divisions; sometimes the leucorrhœa is only the symptom of a general condition or diathesis, (whether strumous, gouty, or dartrous.) that demands the physician's chief attention†; sometimes on the contrary, the local catarrh assumes

\* *Bulletin de l'Académie de Médecine*, Tome XV. p. 147.

† Many of our patients at St. Louis with eczema and impetigo are subjected to discharges which have their periodical exacerbations and remissions corresponding to dartrous (psoric) crises. Oftentimes redness and excoriations of the cervix uteri, which are but temporary, supervene on these exacerbations.—*Note of the Author.*

a predominant importance, and becomes the source of general and local nervous symptoms which require topical treatment from the first, treatment consisting chiefly in free injections of cold water (*douches ascendantes*) and astringent washes.\*

While opposing the exaggerations of the theory and practice of his master, and especially the useless amputations of the uterine neck, Dr. Pauly retained the teachings of La Pitié in relation to the local treatment of *engorgements*, which Lisfranc regarded as the climax of uterine pathology.

It was reserved for another pupil of Lisfranc to reduce to their real value the assertions which the surgeon of La Pitié advanced on this subject, with so much confidence.

Dr. Baud undertook in a memoir addressed to the Academy of Medicine in 1849, to establish that the uterine affections on which Lisfranc particularly fixed his attention had their source, almost all of them, in a constitutional affection, of which the local lesions were simple consequences. This author maintained that Lisfranc beguiled by the errors of the Physiological doctrine, had made *inflammation* the origin of all the chronic diseases of the uterus, and *engorgement* their constant result. (And many a surgeon in our day has got no farther.)

On the other hand, Dr. Baud, attaching great importance to certain deviations of the womb, regarding them as the causes of most cases of dysmenorrhœa and sterility, discovered in one particular displacement (*anteversion*, which he proposed to remedy by a special instrument) the source of a multitude of disorders, of *engorgements* among others. Engorgements were thus made a secondary local lesion, altogether refractory to the treatment for chronic metritis.

M. Hervez de Chégoïn regarded the opinions of M. Baud as too general and too exclusive. He attached as much weight to retroversion as the author of the essay did to anteversion.

The conclusions of Dr. Baud's memoir are remarkable, and they agree so closely to some of my own assertions, that I shall quote them literally. They are summed up in the three following general propositions:

1. All treatment which ameliorates the condition of the functions in general is one step towards the cure of uterine diseases.
2. All treatment the effect of which is to benefit the local disorders at the expense of the general economy aggravates these diseases.
3. The treatment should be in accordance with the idea that the condition of the uterus is passive and mechanical.

This last proposition might serve for an epigraph to M. Valleix' recent cases; but let me not anticipate. The memoir of Dr. Baud

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\* See my *Memoir on the Treatment of Leucorrhœa* (Rev. Méd. April, 1845;) and remarks on the *Therapeutics of Diseases of Women*, (Bulletin de Thérapeutique, January, 1848.)—*Note of the Author.*



and the remarkable report of M. Hervez de Chégoin, excited a discussion in which many distinguished surgeons expressed their views.

The day the report was read, I could not forbear remarking that I had opposed for twelve years past the practice which some modern surgeons adopted, in consequence of ascribing an undue importance to the uterus, and attending solely to local symptoms, a practice pregnant with errors and abuses. How much wiser was the theory and practice of the enlightened and conscientious savants of the last two centuries, who considered that the non-gravid uterus played a subordinate part in the economy, and regarded that organ as a sort of emunctory, whose fluxes and congestions usually depended on some cause affecting the system at large! Long since, I proposed to substitute for caustic and the antiphlogistic treatment in vogue, the use of astringents, cold, injections of cold water, sitz-baths, etc., combined with such means of support or readjustment as the mechanical displacements of the uterus might indicate.\*

At the following meeting, I had occasion, in reply to different speakers, to review some of the assertions made in the discussion, many of which were contradictory, and could prove were it necessary, how *anatomical diagnosis* may lead the prejudiced into error, notwithstanding the perfection to which it has been brought, and that its advocates are pleased to term it the only true foundation for rational practice! Thus while Lisfranc proclaimed *engorgements* the mother-lesion of the disorders peculiar to women, his disciple Dr. Baud considered them a secondary result, and M. Velpeau went so far as to doubt their existence. But, by way of compensation, the professor of La Charité announced the frequency of an *inflexion* of the neck, the source of a great number of symptoms, a morbid state which many eminent surgeons, MM. Moreau, Malgaigne, and Roux, among others, declared they had never seen. Then came M. Robert, seeking to extricate *ulcerations* of the cervix from the kind of discredit into which they had gradually declined, and ascribing to *granulations* of the uterine meatus all those symptoms which Lisfranc referred to engorgements. Lastly, while the author of the memoir considered *anteversion* as the commonest and most serious deviation, the author of the report maintained that *retroversion* was the predominant lesion. If we consider, also, the discrepancies of opinion in regard to *anteflexion* and *retroflexion* of the cervix, we shall form some idea of the want of unanimity not only in regard to the value of the diagnostic signs of uterine disease, but in respect to the very existence of these signs.

For my part, I am quite disposed to admit, with MM. Lisfranc, Jobert, Malgaigne, Roux, and Huguier, that *chronic engorgements* of the cervix uteri exist; but I regard them almost invariably as the effects of a lymphatic diathesis, the consequences of parturition, or

\* *Bulletin d l'Académie*, T. XV, Séance du 9 Octobre 1849.

the complications of leucorrhœa. When, under such circumstances, local and general morbid processes are developed, these processes being nervous and congestive rather than inflammatory, will not yield, as a general rule, to the antiphlogistic treatment advised by Lisfranc, nor to cauterizations of the neck of the uterus. In addition to the sedative and astringent local treatment I have mentioned, I insist on the necessity of general treatment adapted to the lymphatic, herpetic, gouty, or syphilitic diathesis, which frequently keep up discharges from the uterus, and prevent the cure of the engorgements, granulations, and ulcerations revealed by the speculum.

On the other hand, I am altogether inclined to recognize, with MM. Velpeau, Moreau, Huguier, Hervez de Chégoin, and Baud, uterine *deviations*, as the source of local symptoms, provided they are sufficiently grave and lasting to constitute real diseases. But I also admit, with MM. Jobert, Huguier, and Moreau, that there are abnormal states that are quite harmless, which are sometimes improperly treated as morbid conditions.

As to M. Amussat's opinion, which makes no account of the notions our predecessors have left us, and dates the commencement of the science of uterine affections from the application of the speculum, I reply that he forgets two things: 1. That the errors in diagnosis exposed in the discussion also date from the invention of that instrument; 2. That the principal object of that debate was to pass judgment on the special pathology and therapeutics which Lisfranc and his imitators substituted for the history of *Leucorrhœa* or uterine catarrh, as described by the physicians of the last century and the commencement of the present.—I leave it to the profession to decide whether that judgement has been advantageous of the modern theory and practice. As to those moral influences, which were so little regarded in the surgical discussion, which nevertheless present such curious phenomena in all the diseases of woman, and especially in those women whose imaginations are excited by the fear of what they term *an ulcer*, I have already described their effects, and presented them to the attention of practitioners; \* and I purpose hereafter to return to this interesting subject.

I come now to the late discussion, excited by a report of M. Depaul on various documents relating to the treatment of uterine displacements by Professor Simpson's intra-uterine pessary, which M. Valleix adopted and introduced in France.

The extended and judicious report of M. Depaul terminates with a series of conclusions, some of which I will quote in substance.

"1. The influence of uterine deviations on the health of women has been considerably exaggerated."

I extend this proposition, and apply to it all the other local lesions

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\* See my article on *the neuroses* in the March number of the *Revue Médicale*, for 1840; the report of M. Jolly, in the number for September, 1843. Lastly, the number for January, 1848, of the *Bulletin de Thérapeutique*.—Note by M. Gibert.

which have been successively brought forward as the causes of nearly all the discomforts experienced by women, (ulcerations engorgements, granulations.)

"2. In many cases, the symptoms referred to these deviations, are produced by some other pathological state of the uterus."

I suppress the words: *of the uterus*; for in many women treated as if affected with some lesion of that organ, the uterus presents no morbid alteration that can be appreciated by the senses; in some cases even, moral causes alone produce the symptoms.

"3. Deviations (within a certain limit and under certain conditions) constitute only a simple unimportant deformity, which has no deleterious influence on the health."

"4. There are some deviations, however, though they are infrequent, which appear to induce serious disorders, and to require the intervention of art."

"5. Those who have attributed the ameliorations and cures of a large number of women to the use of the intra-uterine pessary, have overlooked the fact that, in these cases, other means were employed, whose well known action (in chronic phlegmasiæ, or a neuralgic condition) explain the results which were obtained."

"6. The cases communicated by MM. Broca and Cruveilhier to the Academy, and other cases observed in France and England, demonstrate only too clearly the danger attending the employment of the intra-uterine pessary."

"7. We therefore think that instruments of this kind (from which we carefully distinguish the hysterometer, or uterine sound, an exploring instrument applicable to certain exceptional cases) should be condemned and proscribed, for they are useless, being incapable of producing the effects expected of them, and exposing patients to the most serious dangers."

Many of the orators who participated in the first debate, engaged in this, sustaining, with some modifications, the opinions which they advanced in 1849, in regard to the general question, and examining the points which were more especially the object of the report. One of them, M. Malgaigne, who had previously argued against M. Velpeau's views on inflexions of the cervix, admitted that a more attentive study of the subject and an extended experience, had changed his opinions in this particular.

I shall briefly review the principal topics embraced in the discussion which followed M. Depaul's report, commencing with the speech of M. Malgaigne.

The orator referred, in the first place, to the discussion on the nature and treatment of uterine affections, which took place five years ago. "The difference of opinion which were then manifested still prevail; what some attribute to uterine displacements, others refer to engorgements, to metritis, uterine catarrh, or simple neuroses, while others again discover in some general condition of the organism, the source of every local disorder. What is now required according to M. Malgaigne, is exactitude of diagnosis, which may enable us to connect certain symptoms with some precise



species of alteration, and to get rid of the confusion which involves those who see the same kind of lesion in simple and complicated cases, and employ the same treatment in all. Having directed his studies with this view, M. Malgaigne had arrived at the conclusion that the uterine affections under discussion might be distributed in three principal divisions, viz :

1. *Displacements*, (prolapsus, anteversion, anteflexion, retroversion, retroflexion.) The principal diagnostic sign is found in the effects of the vertical and horizontal positions of the body, which suddenly and completely aggravate or relieve the patient's sufferings.

2. *Chronic Metritis* of every variety, (engorgement, catarrh, granulations, etc.) The cervix is painful when touched, and the recumbent posture (which is necessary for a cure) only moderates the pain, without relieving it altogether.

3. *Neuroses*, or neuralgiæ, which are observed under two forms : neuralgia of the cervix, and neuralgia of the appendages of the uterus.

M. Malgaigne considered M. Depaul's condemnation of the intrauterine pessary too absolute. It was proper, in the first place, to make a distinction between simple catheterization of the uterus, which was almost exempt from danger and the employment of an intra-uterine pessary. It was also necessary to take into account, the rare and exceptional cases in which mechanical treatment, by the pessary, redressor, or hypogastric girdle, have produced sudden and instantaneous relief, and also those yet more remarkable examples, in which the simple contact (*attouchement*) of an instrument with the cervix uteri has sufficed to dissipate the symptoms.

M. Malgaigne's general conclusion is, that the intra-uterine pessary should not be condemned until it has been thoroughly tested, by being used with prudence and precaution in those cases in which diagnosis clearly indicates the necessity of a redressing instrument.

It is obvious that this is an incomplete view of the subject. In his three grand divisions, the orator makes no mention of constitutional causes or diathesis. Does he not admit, with us, that syphilitic, strumous, gouty, and dartrous diathesis are the sources of catarrhs, erosions, and engorgements, which cannot be considered mere local lesions of the uterus? What value does he attach to the influence of the moral on the physical faculties, by which morbid symptoms are so readily engendered in women? What are we to understand by *metritis*, if congestions and fluxations, passive and inflammatory engorgements, discharges, ulcerations, and divers specific lesions are classed under this term.

M. Depaul replied to M. Malgaigne; he did not, however, approach the main question, but insisted on this fact, which, he maintained, was established by incontestible statistics, viz :—

That a great number of uterine displacements produce no symptom whatever; and that, in many other cases, when concomitant lesions are cured, the symptoms erroneously attributed to displacement disappear of themselves.

M. Huguier came next, and by a precise and logical argument attempted to prove, from anatomical, physiological, hygienic, and

pathological data, that some displacements (anteversion, retroversion, inflexion, anteflexion and retroflexion) were the direct causes of special disorders of the functions of the pelvic viscera, and that oftentimes they could be rationally treated and cured.

He believed that latero-flexions and latero-versions usually depended on irremediable anatomical anomalies, but that they usually produced no incommmodity; the same thing nearly was true of anteflexions, (the very deviation that M. Velpeau had pronounced, in the former discussion, the cause of the symptoms usually ascribed to so-called engorgement.) The retroflexions and retroversions, direct causes of sterility in some cases, involved difficulties, M. Huguier said, that it is not easy to remove. Oftentimes, however, he had succeeded with his fingers, aided by an uterine sound, and a bougie, or pledgets of lint in the rectum, in reducing or partially rectifying such deviations. Of all displacements, anteversion could be treated most advantageously, by an hypogastric bandage, by astringents, and appropriate decubitus. Not unfrequently an abnormal *mobility* of the uterus produced unpleasant symptoms, and in these cases the hypogastric belt was particularly efficacious.

M. Hervez de Chégoin followed M. Huguier, and, in his turn, maintained the practical importance of displacement as an element of uterine disease, and discussed its treatment by mechanical means.

M. Hervez established three principal classes of deviations: anteversion, retroversion, and prolapsus. He declared that he had often relieved distressing general symptoms, unaccompanied by local symptoms, (which practitioners would consequently hesitate to refer to their true source,) by replacing the uterus by means of a special extra-uterine pessary. He formerly denied that deviations were harmless, as has been maintained by some surgeons, who mistook the exceptions for the rule. He was positive that displacements produced sterility and a variety of serious symptoms, which could only be relieved by a mechanical treatment. He advocated his own pessary, which was innocuous, and pronounced the instrument of Simpson irrational and dangerous. In consequence of its communication with the peritoneal cavity, he considered all irritation of the cavity of the uterus unsafe.

M. Paul Dubois replied to M. Hervez, expressing his disbelief in the efficacy of the method of reduction employed by the latter. He thought that replacing the uterus by acting on its internal walls was a rational proceeding in certain cases. The question was, could it be modified so as to avoid the dangers that now attend its use. In 1849, M. Dubois pronounced an extended discourse on the whole subject of uterine affections, in which, although he attached more importance to the etiology of chronic metritis than I do, yet, the distinctions he established and the reservations he made, approximated his views much nearer to mine than to those of any other of the speakers. It was at the meeting of the 10th of June that the judicious and eminent professor replied to M. Hervez de Chégoin. On June 27th, he resumed, and took up the subject of uterine displacements and their treatment.

As in 1849, M. Dubois attributed primary importance to chronic metritis,

and he ascribed to this complication, like the reporter, M. Depaul, the majority of those symptoms which others made to depend on displacement. He believed that most of the patients suffering from these symptoms, even those successfully treated by the Simpson Valleix method, were cured by the removal of the co-existing chronic uterine inflammation. By temporarily replacing the womb, and keeping it in a state of immobility, time was afforded for the resolution of the concomitant metritis. The orator admitted also, that an intra-uterine instrument might favorably modify a state of local nervous irritability which existed in many women. He believed that the intra-uterine instrument was applicable in the exceptional cases in which the gentler means in common use, antiphlogistics, sedatives, astringents, cauterization, pessaries, etc., have failed. He observed that in consequence of disordered menstruation depending on uterine lesions, a state of chloro-anæmia was often induced, which only yielded to general treatment. He had two grievous faults with which to reproach the intra-uterine redressor, regarded as a special method of treatment: 1. It caused pain and inflammation which might become fatal; 2. It did not procure a durable reduction or replacement of the deviated or displaced womb. Operators were utterly deceived on this point.

M. Cazeau objected to ascribing to an hypothetical *metritis* the symptoms observed in women palpably affected with displacements or engorgements. He denied the existence of chronic metritis, as far as related to the parenchyma of the womb, (imitating the scandalous incredulity of M. Velpeau, who in 1849, denied engorgement, and substituted therefore, *anteflexion*.) M. Cazeaux admitted with MM. Huguier and Hervez de Chégoin, that prolapsus, retroversion, anteversion, and even anteflexion, were direct causes of symptoms remediable by mechanical means. He thought that the reporter, M. Depaul, had strikingly displayed the dangers of the intra-uterine pessary, but had not appreciated its advantages. M. Cazeau agreed with Professor Dubois in thinking that cures might be obtained, in exceptional cases, by the prudent and careful application of this instrument, which were not attainable by any other method.

I avow that MM. Dubois and Cazeau appeared to me too lenient towards the intra-uterine instrument, restricted as are the advantages they attribute to it. M. Gillebert d'Hercourt, of Lyons, has demonstrated in my opinion, by his experiments on the dead subject, the superiority of pessaries of vulcanized caoutchouc, which can be inflated after introduction, over all other mechanical means for the adjustment of uterine displacements.\* At the meeting of July 4th, the discussion was continued by Professor Velpeau.

He opposed the opinions of his colleague M. Dubois. He believed that the uterus could be replaced by the Simpson-Valleix instrument, or by any analogous intra-uterine bougie carefully applied and properly superintended; and a radical cure was attained thereby, whereas pessaries and hypogastric belts are palliatives which must be habitually and indefinitely employed. He had often used similar instruments, and had acted on the internal surface of the uterus by catheterism, injections, cauterizations, etc.,

\* M. Gillebert's researches are published in a pamphlet (*Etudes sur le mode d'action des pessaires*, 8 vo. Lyons, 1854) which we have been unable to obtain.—O.



so frequently, that he was inclined to think the dangers of M. Valleix's method were grossly exaggerated; the method, moreover, could be modified and perfected. M. Valleix's results were remarkable and deserved attention. The three fatal cases which have been so bruited abroad should be compared with the very numerous cases in which intra-uterine *redressement* had been successfully employed. The orator regretted that M. Depaul had not discussed the fatal cases reported by MM. Broca and Cruveilhier, instead of making a condemnation of the method of M. Valleix the special object of his report.

M. Velpeau entertained doubts in regard to the neuroses and phlegmasiæ invoked by some of his colleagues in explanation of the obscure points in this question. He referred to the frequent blunders to which Lisfranc's *engorgements* had given rise, and insisted that the antelexions and retroflexions, to which he had first called attention, were the sources of characteristic local symptoms. These displacements were not always curable; but hypogastric bandages, pessaries of different forms, and intra-uterine sounds and redressors were resources of art that were sometimes employed with complete success, after the failure of all other remedies.

This debate, like the one that preceded it, has proved that the greatest diversity of opinions may exist among the most eminent and enlightened men in regard to material lesions, which are accessible to vision and to the touch.\*

Uterine displacements, which were barely mentioned in the discussion of 1849, and which many surgeons at that epoch, contested or altogether denied, at least as a pathological species, with a characteristic array of symptoms; these uterine displacements were the turning point of the discussion of 1854.

Now if we recall the predominant importance which surgeons have, in the last 30 years, successively assigned to *chronic metritis*, to *ulcerations of the cervix*, to *engorgements of the neck*, to *granulations of the internal surface*, and lastly, to *deviations*, we may safely predict that the latter lesions will not long enjoy their "bad eminence" in uterine pathology. If, on the other hand, we reflect on the serious and disastrous consequences which have resulted from the practical application of these wild etiological theories, we shall appreciate the value of words of caution promulgated by an esteemed and enlightened Academy.

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\* It is curious to see how certain aristarchs, with the arrogance and imperturbable impudence engendered by the habit of being eloquent in the closet, have undertaken to lecture the orators of the Academy, and to assign subjects for their expressions of opinion.

"No one [if we believe these gentry] has laid down the true basis of the discussion. . . . To make displacements of the womb and their treatment by the intra-uterine pessary a simple practical question, is [in their judgment] the way to leave the Academy as much in the dark as before the discussion."

O profound logicians, eminently *positive* philosophers! I think that you might learn a lesson of modesty in these various appreciations and interpretations of material and *positive* facts, elicited from the learned and skillful men who engaged in the discussion which you regard as so unphilosophical.—*Note of M. Gibert.*

This indignant growl is intended for Dr. Amedée Latour, editor of the *l'Union Médicale*.—TRANSLATOR.

When we see great surgeons so possessed by illusive hypotheses, as to propose and practice amputation of the uterine neck in women with no serious lesion, or no disease whatever of the uterus;—when, in other instances, incipient pregnancy has been mistaken for grave uterine disease requiring the most energetic treatment;—when, over and over again, we observe patients subjected to cauterizations, pessaries, bandages, protracted decubitus, and the remedies of a whole special therapeutical arsenal, who continue to suffer until they abandon their unfounded apprehensions, and abstain from all surgical treatment; it is impossible to deny that flagrant abuses have been introduced in the treatment of diseases of women, abuses which it is the right and duty of academic bodies to signalize.\*

To caution the learned and skilful against their own delusions; to enlighten the ignorant who accept, with blind confidence, the theories promulgated by the former, and practice whatever is advised by men of eminence;—lastly to admonish the public at large of the dangers to which too great credulity will expose it,—these are the objects which may be accomplished by a decided expression of opinion by the Academy. This may be attained by a slight, but important modification of the conclusions of M. Depaul's report.

I cannot now refer to all the facts in favour of the version which I advocate. But I may be permitted to advert briefly to the fact that the nervous, strumous, dartrous, syphilitic, rheumatismal, gouty, and hemorrhoidal diatheses, very frequently give rise to symptoms that are commonly ascribed to those uterine lesions which occupied the exclusive attention of Lisfranc and his pupils,—lesions that are purely secondary when they really exist.

I hasten to admit that local lesions not infrequently coexist with

\* "I have examined," Dr. Duparque writes, "portions of uterine tissue, in a perfectly normal state, which had been removed in consequence of supposed schirrous induration of the cervix."

"I can affirm," Dr. Deligny said to me, "that while Lisfranc was temporarily clinical surgeon at St. Côme, I saw him amputate the cervix in three cases in which only slight erosions existed."

A woman in the commencement of pregnancy was on M. Roux's operating table, at Hôtel-Dieu, to undergo amputation of the cervix uteri. From some cause, the operation was postponed, when the patient's condition was happily discovered.

An eminent surgeon examined a lady of twenty-six years by the touch, and gave an alarming prognosis; he thought that if she continued to neglect herself, in two months it would be necessary to have recourse to extreme measures. He had just amputated her elder sister's cervix. Subsequently this young lady attributed every uneasiness to her *ulcerated uterus*. I had great difficulty in eradicating these notions; but after venæsection, baths, rest, and mental discipline, her symptoms were ameliorated, and her cervix was in the healthiest possible condition. [*Quotations from the work of Dr. Pauly.*]

For my part, I have attended two young women, in whom incipient pregnancy was mistaken for uterine disease. It was proposed to amputate the cervix in one case, and, in the other, to burn it off with the actual cautery. In both, pregnancy was normal and regular.

I am also acquainted with two ladies of over sixty years, in whose cases a celebrated surgeon advised removal of the cervix thirty years ago, who now enjoy perfect health.—*Note of M. Gibert.*

the general diathesis. The most common is uterine catarrh, of which, redness, tumefaction, superficial ulceration, and passive congestion of the cervix, are incidental accompaniments, which occur particularly in women who have borne several children.

But the degree of importance ascribable to these lesions is to be estimated from a multitude of local and general circumstances. In many cases, it depends entirely on the amount of mental disorder excited by apprehension of uterine disease, which disorder re-acts on the physical organization. It is thus that we are able to account for cures obtained by the most dissimilar and singular methods. Some local phenomenon ceases, which has kept up what I call the uterine monomania, and presently all the nervous symptoms excited by this monomania cease likewise.

I will adduce a single illustration of these strange recoveries, in which moral influences are chiefly effectual, although attention to the local condition is also requisite :

A weak and nervous lady became alarmed by the reports of several friends, who were undergoing speculum treatment for womb-disease. She presented an anteversion of the womb, the organ being very moveable in a large pelvis; there was a decided anteflexion of the cervix, and uterine catarrh. In addition to these local signs, there existed the *cortège* of symptoms that Lisfranc attributed to *engorgement*: gastralgia, hysterical spasms, bearing-down pains in the loins, sense of weight in the perinæum, and pain in locomotion.

After divers ameliorations and relapses, a menorrhagic attack supervened, which was a finished stroke to the terrified lady, who took to her bed, and remained there for some months, the bleeding recurring from time to time. At last, I resolved to employ a kind of pessary recommended by old Dr. Devilliers, which is nothing else than an unripe orange. The soft and polished surface, and rounded form, of this fruit, allows it to remain in the vagina without causing discomfort, while its rind furnishes an astringent juice.

The green orange was introduced during an interval in the metrorrhægy; the next day, the lady left her bed; the pains ceased; no more blood appeared except at the regular monthly period, when its quantity was moderate. Two years have elapsed, during which this lady has enjoyed uninterrupted health.

The pessary escaped during an effort of defecation five days after it was applied.

In this case as in many others, I attribute the cessation of the symptoms to the moral reaction which took place when the imagination was calmed, and diverted from eternal contemplation of the uterus. It is useless to add, that in the case reported, the deviations of the womb continued notwithstanding the restoration of the patient's health.

We must not forget that, barely twenty years ago, the cervix uteri was amputated for simple ulcerations, and that if this operation had not almost immediately produced several disastrous results some surgeons would still practice it. Now there are innu-



merable examples of women who refuse to submit to this operation, who are now in perfect health.

I trust that the operation of intra-uterine *redressement* will be abandoned in its turn. Meanwhile, there is both utility and propriety in a salutary announcement to the medical public, of the abuses in surgical practice in uterine affections. It was on this account, that I proposed to amend the conclusions of M. Depaul's report, which apply only to displacements, so that they should embrace diseases of the womb in general. Thus modified, the conclusions would read as follows :—

1. There has been great exaggeration of late years in regard to the influence of displacements of the womb, *and other uterine lesions, such as ulcerations, engorgements, etc., on the health of women.*

2. In many cases, the symptoms ascribed to these lesions, are produced by pathological causes of an entirely different nature.

[*Virginia Med. and Surg. Journal.*

*On the Etiology and Hygiene of Cancerous Tumours.* By Professor BOUCHARDAT, of the Faculty of Medicine of Paris.

Having devoted a good deal of attention to some of the points involved in the great discussion on cancerous tumours which has lately agitated the academy of medicine, I had resolved to take part in the debate. But in preparing my remarks for that occasion, I found myself wandering so much from those subjects to which the discussion was limited, that I have determined to arrange my ideas in this form, hoping that the facts which I am about to produce, may, one day, be of use in the investigation of those difficult and important questions which relate to the etiology, hygiene and prophylaxy of cancerous tumours.

Before entering upon the matter before us, I cannot resist the temptation of expressing my opinions, with regard to one of the parties to the late academic debate. I mean that party who denied the value of the microscope in clearing up the diagnosis of cancerous tumours. To some of these persons who have taken part in the debate, I am tempted to address a question, which I never fail to propose to those who talk with me about the alcoholic ferments, and who regard with doubt, the admirable discoveries of M. Cagniard Latour. "Have you studied the ferments with the microscope?—No.—Well, begin at once to study them conscientiously, and then we will discuss the subject."

I well know that the subject of cancer presents many serious difficulties, but by ascertaining precisely the definition of the term, we can for the most part, explain away the difference of opinion. It is very evident that if we retain the old definition of cancer, the microscope will furnish information of great value without doubt, but which will still not be pathognomonic.

Cancer, they say, is an accidental production, capable of being

transmitted hereditarily, but produced more frequently from unknown causes. It generally increases rapidly, invading the surrounding tissues; ulcerates in process of time, producing great loss of substance, and sometimes large and repeated hemorrhages; developing in the neighbouring glands and ganglions engorgements of the same nature as the primary tumour; returning most generally after ablation, either in the cicatrice or in the neighbouring glands, or in some other part of the economy; producing in its last stages a peculiar cachexia, and giving birth, in at least one-half the cases, to the production of many tumours either in the liver, lungs, or some other part of the system.

We comprehend without difficulty, that some one of these symptoms might be absent, and yet, that the existence of cancer would be not less certain. But does the manifestation of these various characters constitute a unique, fundamental disease, as for instance, the various manifestations of the syphilitic poison constitute a malady identical in its origin?

If we pursue this comparison carefully, it is plain that if from its causes, progress, and treatment, we should conclude that syphilis is a special disease, assuming various forms, we must conclude that the cancer of the old authors cannot be considered as a morbid unity. Diseases, certainly presenting many points of resemblance, yet differing in many important features, have been grouped together under the general name of *cancer*. I doubt not that the time is coming when these distinctions will be established, and I believe that we approximate the truth when we say, that cancer does not form a morbid species, with distinct varieties, but should be rather considered as a class of diseases with many symptoms in common.

Nevertheless, before determining this great question of the morbid unity of cancer, we should examine the objections to be urged against that large number of partizans who group cancerous affections together, just as they group syphilitic or tuberculous affections.

There is no doubt that from the point of view in which many authors have placed themselves, this morbid unity seems very apparent, but when we regard this difficult question in its other aspects; when we consider the important facts which can be obtained from its etiology and therapeutics, our faith in this morbid unity diminishes. We can understand how an illustrious surgeon can say "I appeal to my study of this affection at the bedside, and I divide cancer into three classes—those which always return, those which frequently return, and those which rarely return," (*Velpeau, session of the Academy, 9th January.*) The great surgical experience which has led to this opinion, deserves our highest respect, particularly when it emanates from one who has so ably and patiently examined this difficult subject. But to the physician, this problem can receive another solution. To him, the dis-

tion of the micrographer leads to useful results which cannot be appreciated by the surgeon who views the question in a different aspect.

Before going farther with this discussion, I will reproduce various extracts from the *Moniteur des Hôpitaux*, the work of M. Broca, a young surgeon, who at the same time is a micrographer and clinician. That he has studied the subject with great diligence is proved not only by the beautiful essay which was received with so much approbation by the academy of medicine, but also by many other remarkable articles which appeared in the journal edited by M. Castelnau.

We have the most profound conviction, that future investigations will show the precise distinctions which exist between the varieties of cancerous tumours. At this time, the majority of physicians confound the simple glandular hypertrophies and cancerous tumours properly so called. But although the science is not sufficiently advanced, to determine accurately the lines of difference, yet we cannot doubt that some progress has been made.

Let us now examine the *etiology* of cancerous tumours. We can take up successively the influence of hereditary causes and of age, before we discuss the important questions of diet, moral influence and external violence. We should sift to the bottom the chaos of *malignity*, and endeavour to shew by what rules we may either avoid cancers, or retard their progress when the evil has developed itself.

*Hereditary influences* play an important part in the pathogeny of cancer. M. Leroy d'Etiolles estimates that there is an hereditary transmission in one-tenth of the cases; M. Lebert in one-seventh. Without disputing these statistics, I will remark, that the hereditary influence in the genesis of diseases, comprises not only a native predisposition, but also a group of habits formed by a similarity of education or even of organism, and that very often these *hygienic habits* lead many generations to the same end. Hereditary predisposition is not alone the fatal cause, but we can by rectifying the customs and bad habits of our predecessors, avoid the curse under which one or more generations have fallen. I am convinced that this view of the subject deserves serious attention.

*Functions of the skin in connexion with age.*—We see cancers at all ages. It has been observed in children that the eye is usually the part affected, but it is a well established etiological fact that the relative frequency of cancer is much greater in the decline of adult life or in the beginning of old age.

The appearance of the three principal species of cancer; *cancer properly so called*, *cancroids* and *fibroids*, coincide most generally with a degeneracy of the functions of the skin and especially in that important function (and yet one but little studied in its pathogenic effects), the production of the epidermis, with its appendages the nails and hair.



The important principles which are eliminated by the skin under the form of epidermic scales and hair, play an important part in the animal economy, and many diseases of the latter years of life appear at this period of giving way in the functions of the skin.

*External violences.*—We attribute in the etiology of cancer, much importance to the influence of external violence. I am far from denying this influence, but it is evidently indispensable that the other conditions of age and predisposition should be also present to give any value to this cause.

*Depressing moral influences and passions.*—The moral affections, and more especially *grief*, has a certain influence on the development and progress of cancerous affections. The effects of sorrow are depressing, they repress the energies. The skin is the first organ which feels the general languor. We can very well understand then, how these emotions lead to cancer, if the conditions of age and of nutrition are also present. We can also see how these depressing influences are involved in the word malignity, an extraordinary expression in scientific language, and which means something that we do not understand. However this may be, we have two principal interpretations of this word in connexion with cancer.

Cancer is called malignant either when it leads rapidly to death, or when it extends quickly into the neighboring glands or into different organs than those originally attacked. That both of these results are greatly encouraged by the influence of the emotions of grief, we well know, and hence the influence which these passions have over the question of the malignity of cancerous tumours.

We say that a cancer is malignant, when it extends very rapidly. This occurs when there is a change in the nutritive functions, in fact, when there is an anomalous action established in the organism. It continues, indeed, because the movement advances in the direction it first assumed. Stahl has adopted this maxim of Plato, which expresses the idea: *facilius est movere quietum quam quietare motum.*

Without doubt, the skin does not alone participate in this abnormal direction of the vital movements, but it plays a part worthy of attention. It is very probable that the three principal species of cancer are caused by different modifications of nutrition. So we will say, though with great reserve, that the true cancer arises from a diminution of the epidermoid productions, and is influenced by age, or by some modifications of nutrition in the glands and lymphatic ganglions; that the development of fibroid coincides with a diminution in the epidermoid production and a diminution or aberration in the production of fibre, and that canceroid owes its origin principally to a perturbation in the epidermoid functions.

*Diet.*—Deducting the many glandular hypertrophies which are often confounded with cancer, I am convinced that diet has a great

influence in producing the three species of cancer. An exciting and largely predominating animal diet may do much in developing this disease.

The reasons I have for this opinion are drawn from the fact, that this affection is almost always met with in carnivorous animals; the remarkable immunity of the Trappists who never eat meat, which is attested by M. Debreyne, and the mode of destruction and elimination of the residue of animal matters.

*Prophylaxy.*—I will sum up, in conclusion, the rules I believe most useful to follow, to prevent cancer, or to arrest its progress when the malady has displayed itself:

1st. To rouse the functions of the skin by cold baths, by daily frictions with coarse flannel or hair gloves.

2d. To stimulate the muscles by daily and regular exercise, and by gymnastic exercises in proportion to the powers of the system.

3d. To prefer a vegetable diet, and to eat very moderately of meats.

4th. To avoid moral emotions particularly of a depressing character, and to keep the mind amused and agreeably occupied.

5th. To obtain either by regular habit or by some purgative, one or two regular operations from the bowels every day.—[*Virginia Medical and Surgical Journal*.

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*On Uræmic Eclampsia.* By F. WIEGER.

Dr. Wieger proposes to defend that new view of eclampsia which regards it as a complication of uræmia, against the older views sustained by L'Huillier and Depaul. He divides his memoir into six parts:

1. *Critique of the Negative Observations.*—The author seeks to show that the cases of eclampsia without albuminuria, recorded by L'Huillier, Depaul, and Mascarel, must be eliminated, either because the albumen was not searched for with sufficient care, or because the absence of albumen does not prove the absence of uræmia.

2. *On the Condition of the Kidneys.*—He seeks to invalidate the assertion of Blot, that the kidneys in eclampsia are not always diseased, by the collection of as many cases as possible. He maintains that in albuminuria, fibrinous cylinder-casts are always found in the urine, and that these often increase after delivery, and are found, as Braun and Litzmann have shown, so long as there is albumen in the urine.

He gives a table, which shows that up to the tenth day of the puerperal state anatomical lesions in the kidneys are always found; and that profound alterations of the kidneys are more frequent than congestive conditions.

He concludes this section with the following deductions:

*a.* The kidneys may be diseased without albumen being separated in the urine in observable quantity.

*b.* The absence of albumen at a given time is no sure proof of the absence either of disease of the kidney or of uræmia. The presence of albumen at a given time stands in no relation to the stage of the disease.

*c.* The albuminuria increases at the approach of labor, during labor, and the fits of eclampsia.

*d.* The kidneys cannot pour out albumen in any considerable quantity, or during a certain time, without becoming clogged up and diseased.

*e.* The appearance of the kidney-disease is often complete, and effected in a short time; often it persists in a slight degree, and becomes aggravated in following pregnancies.

*f.* When it persists during the puerperal state, the disease of the kidney induces other attacks, or causes complications, or aggravates existing ones.

*g.* Albuminuria grows with the occurrence of complications.

3. *Albuminuria and Œdema.*—*a. On Albuminuria.*—Is there albuminuria without nephritis? The author cites instances from Simon, Schmidt, Hensch, and Canstatt, to prove the affirmative. As to the curability of the nephritis which attends pregnancy, he shows that as it depends upon transitory conditions, it is not like Bright's disease, which is commonly dependent upon persistent or recurrent external causes, as cold, &c.

By adducing the statements of Blot and Litzmann, which exhibit the presence of albuminuria in fifty-six primiparæ out of a hundred and seventy-eight, and in twenty-two multiparæ out of a hundred and fifty-nine, he confirms the opinion, that the first labor is a predisposing cause of albuminuria and eclampsia.

*b. Of Œdema and Anasarca.*—The presence or absence of this symptom has no constant value in diagnosis. It is not always present in Bright's disease.

4. *On Uræmia and Uræmic Symptoms.*—*a. On Uræmia.*—Uræmia, the result of nephritis, is characterized in its chemical relations by the retention of water and excrementitious matter in the blood, which in its turn is impoverished by the loss of albumen and sometimes of globules. The excrementitious matter is thus driven to the skin, stomach, or salivary glands, and even to the lungs, or accumulated in the serous cavities or cellular tissue, to be taken up again into the blood, to aggravate the uræmia. For this reason, a strong diuresis may often persist a long time without exercising a remarkable influence on the nervous system. The degree of intoxication can only be determined by simultaneous examination of the blood and of the urine. He cites two cases of Gegenbauer and Chaiari; in the latter, uræa, and, by decomposition of this, ammonia, were found in considerable quantity in the blood, and



the prophecy that eclampsia would break out was verified. The woman died.

*b. On Uræmic Convulsions.*—In seventy-eight cases of Bright, Barlow, and Frerichs, there was amaurosis and amblyopia ten times; syncope, nineteen times; singing in the ears and deafness, ten times; convulsions, fourteen times. The cerebro-spinal symptoms which precede the attacks of eclampsia have the closest resemblance with those of Bright's disease. Out of a hundred and forty cases of eclampsia collected into a table, forty-three showed premonitory symptoms. Of the cases in which the eclampsia broke out before labor, there were forty per cent.; of those in which it began during labor, thirty per cent.; and of those in which it began after labor, twenty per cent., which were attended with premonitory symptoms. As premonitory symptoms, the author enumerates vomiting and diarrhœa, but principally headache, disturbance of intellect, and often delirium; cramps and amblyopia, sometimes followed by blindness, not unfrequently precede. The changes of the pulse and pupils were too uncertain to be considered.

As characteristic of the so-called uræmic eclampsia, the author mentions that no predisposition lies at the foundation of eclamptic convulsions; they cannot become habitual; as a rule, the fits are frequently repeated. The disease is never chronic; it makes no periodic relapses, and seldom returns in subsequent pregnancies. The symptoms are those of epilepsy, without the cry at the onset.

The question as to the relation between epilepsy and eclampsia the author regards as not settled, but inclines to the view that epilepsy predisposes to eclampsia. Apoplexy of the brain and membranes may cause fatal convulsions, and appears frequently as a complication of Bright's disease, and makes the diagnosis more serious.

*5. Etiology and Prognosis.—External Predisposing Causes.*—The bad method of living of the poor favors the disease, and is the reason why it is more frequent in lying-in hospitals than in private practice.

*Individual Predisposing Causes.*—First pregnancies, twin pregnancies, are mentioned. Dubois has pointed to distortion of the pelvis and rachitis, duration of labor, and mal-position of child, asphyxia, indigestion; mental excitations, as fright, anger.

The mortality is, according to Murphy, 24 per cent.; Blot, 35½ per cent.; Lever, 28 per cent.; the author, 30 per cent. The mortality among the children is given by Blot as 67 per cent., and by the author as 45 per cent. Many children died shortly after birth, without inspection revealing any tangible cause of death. Frerichs, Litzmann, and Braun ascribe this death to intoxication of the blood.

*6. Treatment*—The author divides the prophylaxis into a remote (against the albuminuria), and a treatment against the uræmic pro-

dromata, shortly before the labor. The peculiar condition of the blood indicates the following fundamental rules of a rational treatment:

- a. The blood must be improved by good nourishment, tonics, and iron; Miquel recommends a vegetable diet.
- b. Exciting diaphoresis by baths, &c.
- c. Gentle purgatives,
- d. Maintenance of the urinary secretion by gentle diuretics.
- e. Direct action upon the renal obstruction, by abstraction of blood from the region of the kidneys.

*Treatment of the Uræmic Pre-current Symptoms before Labor.*—Tartar emetic, vapor baths, and scarification of the cedematous parts, are considered. Chailly recommends chloroform when there is great tenderness in the uterus. The author regards it only as a palliative against the convulsions, and not as against the fundamental evil, the uræmia. *General bleeding* he regards as a precious means. *The expectative method*, the author regards as admissible when the convulsions are not strong, or first appear during the expulsion of the child. *Opium*, much praised by many authors, is, according to the author, chiefly useful after delivery. *Cold affusions*, are recommended by Recamier and Booth.

Coma after cessation of the fits, the author treats with diaphoretics, salines, and diuretics, since the condition of the brain is caused, for the most part, not by hyperæmia, but by serous infiltration. Of *revulsive measures*, the author rejects cantharides. Of *antispasmodics*, musk has been useful after too great depletion.

The author then adduces several cases in which artificial delivery was resorted to, showing that often there is a rapid cessation of the attacks after the emptying of the uterus, and that the mortality is about the same.

*Abortion.*—Convulsions which appear before the period of viability of the foetus, end for the most part with its expulsion.

In eclampsia before the beginning of labor, he enjoins excitation of the pains and hastening of delivery. He uses *secale cornutum* for this purpose, when the head cannot be reached by the forceps.—[*Schmidt's Jahrb. Med. Chir. Rev.*

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*On the Cæsarean Operation, and its performance more than once on the same subject.* By Prof. STOLTZ, of Strasbourg.

For upwards of fifty years, says M. Stoltz, this operation, although frequently resorted to in Paris, has not generally been followed by success, whilst towards the close of the last century it was, in numerous instances, attended with the best results, in the hands of the celebrated accoucheurs of that period, Lauversat, Deleurye, Coutouly, Millot, etc. This failure of the operation, in

the practice of modern surgeons, he considers as having led to its being regarded as much more hazardous than it really is, and to its consequent restriction to those cases in which it is found impossible to effect delivery by any other method. Thus, the accoucheurs of Paris have nearly all been induced to adopt the English practice, according to which, rather than risk the life of the mother, they sacrifice that of the child, wherever the difficulty appears surmountable by so doing; a proceeding which our author believes to be unjustifiable, on the grounds that one life is taken without any certainty of thus saving the other. M. Stoltz has performed the Cæsarean operation six times, with the result of saving both mother and infant in four of these instances, and the child in the remaining two. The latest of these cases is that which he communicates to the Academy of Sciences, as possessing additional interest in the fact of its being the second occasion in which the operation had been performed, with complete success, on the same individual.

The patient, Adele Fenninger, æt. 39, was the subject of general rachitic deformity, and had been operated on, three years previously, by Dr. Bach, of Strasbourg, who published the case in the *Gazette Médicale*, of that city, in 1846. On that occasion the operation was successful, although performed under very unfavourable circumstances, the patient being "radicalement" rachitic, in very delicate health, ill nourished, and suffering from considerable obliquity of the uterus. At the time of the operation, somewhat too large an incision in the abdominal and uterine walls was attended with troublesome protrusion of the intestines; and during the progress of the case, erysipelatous inflammation of the points of suture, and phlebitis, followed by œdema of the left inferior extremity, were circumstances which more than once threatened the life of the patient; however, by careful attention, these dangers were averted, and a complete cure was obtained in the space of two and a half months.

The second operation, which presents no features of much importance, is minutely described by M. Stoltz, who remarks, that from the ordinary course of the second pregnancy, three years after the first operation, it may be concluded that the cicatrization of the uterus had been sufficiently perfect to resist with impunity a second dilatation of that organ; and that the second operation, like the first, had been complete in its success, mother and child being both saved. In conclusion, he refers to a number of other instances where the operation had been repeatedly performed on the same patient with successful results. The following published cases are enumerated by him, and the publication mentioned in which they are to be found:—

Dr. Mangold, of Bale, operated, first in 1797, and again in 1801, and M. Mautz, in 1807, upon the same patient, who died on the twenty-second day after the third operation.



Dr. Bacqua, of Nantes, operated successfully on one patient, first in 1797, and again in 1806.

Dr. Dariste, of Martinique, operated successfully on one patient in 1805 and 1807.

Dr. Lemaistre, d'Aix, operated three times on one patient, in 1805, 1807, and 1814. The patient died five days after the last operation.

Dr. Charmeil operated in 1813 (?) and another surgeon in 1814, on one patient, each successfully.

Chaussier communicates the successful performance of the operation a second time.

Merrim of Cologne, operated successfully on one patient, first in 1812, and again in 1826. Dr. Zwanck operated for the first time on a patient named Adametz; Dr. Weideman operated a second time; Dr. Michaelis a third, and again a fourth time, with success.

Dr. Rouvin communicates a case where the operation was repeated with success. Dr. Bowen performed the operation twice on one patient, in 1833 and 1835, with success.

Professor Kilian, of Bonn, operated successfully on one patient, first in 1832, and then in 1838. In another case, he operated in 1837, and the same patient recovered from a repetition of the operation in 1843.

Dr. Mestenhaeuser operated successfully on one patient in 1840 and 1844.

Here then, adds M. Stoltz, are fourteen well authenticated instances of this operation having been successfully repeated on the same patients. In two of the cases mentioned, the operation was performed three different times, but, on the last occasions, followed by the death of the mother. In a third instance, however, it was performed no less than four times with complete success. This example would almost induce him to believe in those cases quoted by some authors, where women were said to have undergone the Cæsarean section six or seven times.—[*Gazette Médicale. N. Y. Jour. of Medicine.*]

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*On the Pathology of the Pancreas.* By DR. EISENMANN.

The interesting experiments of M. Cl. Bernard upon the uses of the pancreatic juice, have led the author of this article to consider whether or not the results obtained by that physiologist, are capable of being applied to the diagnosis of disease in this organ.

If the pancreatic juice assists the digestion, and consequently the absorption of fatty matters, the conclusion is, that when the functions of that gland are destroyed by disease, fat should pass with the dejections, and be found in them in an unaltered condition. It is interesting to observe how nearly science has anticipated what the observations at the bedside of patients laboring under such

disease have confirmed. The author has united the facts observed by others with those presented in a case of his own.

Of seven cases adduced, six terminated in death; there had been abundant fatty evacuations, and *post mortem* examination showed the existence of induration, or other alteration in the pancreas. In the seventh case, quoted from Lussana, the patient recovered. The principal symptoms in this case were copious salivation, a sense of weight in the epigastrium not increased upon pressure, eructations, flatulence, coldness of the surface, and a small and slow pulse. The expression indicated abdominal disease. Constipation was present, but the faeces contained yellowish particles resembling fatty concretions, and which were in fact composed of fatty materials. These occurred in increased quantity after purgatives. Mr. Eisenmann regards Lussana as the first who applied to pathology the discovery of Bernard. In the instance observed by himself, the author had diagnosed pancreatic disease, but had not made out the presence of fat in the evacuations. This circumstance induced him to suppose that the pancreatic juice did not exclusively produce the absorption of fatty matters, but was assisted in this action by the bile. Budge and Wistinghausen have made experiments which countenance this idea, and the author recalls a case cited by Pearson, of a woman who evacuated daily 3 oz. of a fatty substance, and did not present, upon *post mortem* examination, any trace of pancreatic disease, but the liver was pale, large, and destitute of bile. One remarkable circumstance, is, that in many of the cases cited by M. Eisenmann, the oily evacuations had ceased, while the pancreas was so indurated as to render the performance of its functions impossible. The author also alludes to another circumstance, not less worthy of remark, viz, the large quantity of fat yielded, a quantity much greater than that contained in the food, and which leads to the supposition that part of the faecal matters is transformed into fat. However that may be, the fact shows us that the presence of fat in the intestinal evacuations indicates with probability, but not with certainty, derangement in the functions of the pancreas; while, on the other hand, the absence of fatty matters does not authorize us to conclude that there is no disease in this gland, if other symptoms exist indicative of such an affection.

The author has endeavored to employ the facts collected by him in establishing a more correct symptomatology of disease of the pancreas. He divides the symptoms into two classes, those accompanying degeneration of the gland, and those arising from its acute and chronic inflammation. For the first of these, the symptoms are too various to afford any certain signs of the affection; the presence of fat in the evacuations, and the examination of the abdomen by the hand, suggest, but cannot positively determine, its presence. It is otherwise, according to the author, with inflammation of the pancreas. This is distinguished by a sense of weight

in the epigastrium, which is especially manifest about two hours after eating, extending towards the breast with a feeling of oppression; loss of appetite, inodorous eructations, *malaise*, retching or even vomiting, although the tongue may remain clean; constipation; small, diminished pulse; emaciation; expression of features indicative of an abdominal affection; melancholy and sometimes weariness of life.

The author recommends as a mode of treatment, the waters of Friedrichs-hall, in small doses.—[*Vierteljahrsschrift für die Praktische Heilkunde. Buffalo Med. Jour.*

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*On the Comparative Value of Laryngotomy and Tracheotomy in the Treatment of Croup.* By J. P. BACHELDER, M. D. (Read before the New York Medical Association.)

Among the remedial measures employed by surgeons for the cure of croup, that of making an opening into the trachea (tracheotomy) has been most frequently resorted to, while that of opening into the larynx through the crico-thyroid space, has been almost entirely overlooked and neglected. This preference of tracheotomy to laryngotomy, has never seemed to the writer to be predicated upon any sound reasoning; but, on the contrary, that the very nature of things was not only against it, but indicated most clearly that the other alternative should be preferred. With a view to a more correct appreciation of the comparative merits of the two operations, we have been induced to institute an examination into their respective claims to be adopted by the profession. We shall consider

### I. THE OBJECTIONS TO TRACHEOTOMY.

These arise principally from the anatomical relations of important parts to that which is the immediate field of the operation:

1. The middle and inferior thyroïdal veins, and the plexus or network which they form in front of the windpipe, some of which almost necessarily are wounded when tracheotomy is performed, give rise to a hæmorrhage, which endangers and sometimes actually destroys life, either by draining the system, by blood getting into the trachea, or the delay occasioned by its flow.

2. The proximity of the carotids to the trachea, and the irregular distribution of blood vessels in this region.\*

3. The thyroid gland is proportionally larger in the child than

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\* The right carotid sometimes traverses the windpipe; also now and then a middle thyroid artery mounts upwards directly in front of the trachea to the thyroid. Dr. C. E. Isaacs, the Demonstrator of Anatomy in the University of New York, who is one of the most indefatigable and accurate anatomists in the country, says—"I have seen seven cases in which the middle thyroid artery arose from the innominata, and was distributed to the thyroid gland. In two subjects it was remarkably large, and its division in tracheotomy would have occasioned a very profuse hæmorrhage." "In two instances, no innominata existed; but the arch of the aorta gave off,—1. the right subclavian; 2. the right carotid."



in the adult, while other parts (particularly the trachea) are smaller; and the cervical portion of the thymus gland rising, in some cases in childhood, considerably above the sternum, shortens very much the tracheal space between it and the thyroid.

4. The depth and small size of the trachea, especially in children, render it difficult to open, and sometimes, it is said, even to find that organ, and greatly enhance the danger of wounding important parts in close proximity.

5. The deficiency, at the posterior part of the trachea, of the fibro-cartilaginous rings, which therefore occupy only two-thirds of its circumference.

These, when entire, by their elasticity, keep the windpipe fully distended; but when divided in front, as in tracheotomy, this result no longer obtains, the divided extremities fall together, and not only close the opening made by the knife, but actually diminish the calibre of the tracheal tube. This state of things is also aggravated by the action of the sterno-hyoid, and sterno-thyroid muscles, which lie on the sides and partly in front of the trachea, where their inner margins are nearly in contact, at the very place in which the opening is made when tracheotomy is performed. These ribbon-like muscles, when acting forcibly, swell into rounded masses, in consequence of which, the sides of the trachea are compressed and forced together, and the opening, made by the division of its rings, closed. These muscles, when they act, also draw the larynx downwards, which, by compressing the rings into a smaller space, and forcing them backwards, still further diminishes the tracheal cavity. These circumstances,—the action of the muscles and perhaps the flow of blood,—render necessary the introduction of the metallic tube, through which respiration may be carried on, and matters which block up the air passages discharged.

Objections, growing out of the danger, difficulty, and inexpediency of this operation, will be noticed in another place.

## II. OBJECTIONS RAISED AGAINST LARYNGOTOMY.

The objections most frequently urged against laryngotomy, and of course regarded as arguments in favor of tracheotomy, are that in the former the wound is made in the inflamed part, and that the tube (the necessity for which, in this operation, is only assumed) could not be tolerated; therefore, the opening should be made below the seat of the disease. These, I am aware, have been considered and adduced as the most cogent reasons against the opening being made in the crico-thyroid space. To the writer, however, this reasoning has always seemed strangely inconsistent. Let us examine its validity.

1. *Cutting into the inflamed part.* What is croup? Just what its technical name, tracheitis, implies,—an inflammation of the trachea. Dr. Watson, whose authority in this matter will not be questioned, tells us that “the essence of this complaint is a violent

inflammation affecting the mucous membrane of that portion of the air passages which lies between the laryngeal cartilages and the primary bronchi; in a word, of the trachea, or windpipe. That is the genuine seat of the disease, but the inflammation sometimes ascends into the larynx, and not unfrequently dives into the bronchi, and into their ramifications. Usually, the adventitious membrane commences just below the larynx, where it is thin and soft; about the middle of the windpipe" (the *tracheotomic region*) "it is more dense and firm; lower down in the trachea, and in the bronchi, it is generally looser again, pulpy, and broken."\*

With due deference, and in all candor, we would ask gentlemen who adopt the mode of argumentation alluded to, to consider to which place the reasoning most legitimately points? But with us, the idea of cutting into the inflamed part has little weight, when we reflect how often it is done. What surgeon would hesitate to cut off an inflamed tonsil which endangered life? Or, who that has tried it, has failed to find that it is the most prompt and certain method of curing that disease? Who does not cut into carbuncles and inflamed parts to let out matter, and sometimes into parts affected with erysipelas for the same and perhaps other purposes? And who ever saw any injury result from the practice?

2. *Intolerance of the tube.* The other objection brought against laryngotomy is, that the tube cannot be borne when passed into the larynx. The fallacy of this objection will be presently pointed out, when it will be shown that the tube, should one be necessary, is equally well, and indeed better borne, than in tracheotomy, and is much more readily replaced after having been removed and cleansed, than when inserted into the trachea. After what has been said, we shall, of course, be free to admit the necessity of the tube when tracheotomy is resorted to; but in that very necessity is to be found a serious objection to the operation itself, which is instituted for a double purpose,—the admission of air, and the ejection of a superabundant morbid secretion. If, for the former only, the tube might not be so objectionable; but being made of inert materials, it cannot facilitate, but must necessarily impede and prevent, the discharge of matters, which—thickened, inspissated, tenacious, and adhesive—cling to its inner surface, and produce obstructions which require its frequent removal.

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\* To the remarks of Dr. Watson, we would add that the inflammation, which commences in the mucous membrane, not unfrequently, and in severe cases of croup generally, extends to all the other tissues and structures which enter into the constitution of the trachea. This involvement of the structures, somewhat peculiar in their organization, causes a contraction which not only diminishes the capacity of the trachea, but interferes with the movements of that part as a whole, and also of its constituents among themselves. This diminution of calibre and mobility, with its morbid irritability, renders this organ much less tolerant of the metallic tube. Another objection to the tube in the trachea, grows out of the difficulty of adapting its size to the exigencies of the case: if too small, neither respiration nor the expulsion of the morbid secretion can be carried on through it; if too large, it occasions great distress, by putting the trachea on the stretch.

The rima glottidis being the natural aperture through which matters within and below that orifice are discharged, the artificial opening, it would seem, should be as near it as circumstances will admit. If through the crico-thyroid space, and as large as that space will allow, the trachea—entire and all its parts in possession of their vital properties, powers, and actions—will contribute to the expulsion of those matters; which it would not do if crippled by the division of its rings in front, and also shackled and obstructed by an inert tube within its cavity. This tube, if inserted through an opening in the crico-thyroid space, may be short, and therefore less likely to interfere with the functions of the trachea than it would if long and passed far into that organ, at or near its middle portion; in which case the patient, although he has the tube through which to breathe, gets on badly.

*Tracheotomy in comparison with Laryngotomy.*

Tracheotomy is a dangerous operation, and under almost any circumstances difficult to perform, especially in the child. It is sometimes followed by or is the cause of immediate death, by hæmorrhage, by the shock it gives to the system either by its violence or loss of blood, which the exhausted state of the patient cannot bear, or the delay occasioned by the bleeding or other circumstances.

Tracheotomy requires a skillful, practiced surgeon and anatomist, with divers instruments, for its performance.

Laryngotomy is an operation easily and quickly performed without hæmorrhage or delay; is attended with no danger, there being no parts of importance in the way of the operator's knife. It is, indeed, very little more difficult or hazardous than venesection in the arm of a fat child.

Laryngotomy may be performed on the spur of the occasion, by almost any medical man, with the lancet only. The operator needs merely to pinch up a fold of integument directly over the thyroid cartilage, and an assistant to do the same over the cricoid, and then thrust a lancet, scalpel or bistoury, through, and divide the duplicature; this done, and the integuments being allowed to resume their natural condition, the operator, steadying the thyroid cartilage between his thumb and forefinger, pushes the lancet through the crico-thyroid membrane, close to the upper border of the cricoid cartilage, and makes a free opening into the larynx; which may, if required, be enlarged upward, two thirds the length of the thyroid, and downward, entirely through the cricoid cartil-



Tracheotomy, in every instance, requires the insertion of a metallic tube, through which respiration may be carried on, and the morbid secretions discharged.

Tracheotomy is so difficult to perform, that the administration of chloroform has been deemed necessary to its best performance, and there is reason to believe that in more instances than one, the influence of this agent, superadded to the exhaustion induced by the disease, the loss of blood, and the shock, notwithstanding the employment of this substance, has caused death or rendered it more speedy and certain.

In favor of tracheotomy, it is urged that almost all authority is on its side. This is true, most strangely so; for the nature of things, anatomically considered, and common sense based on them, and also on sound reasoning,—seem to be all in favor of laryngotomy.

age; and furthermore, through one or two of the tracheal rings, without trenching on the thyroid gland, and, besides, a portion of the cricoid in front may be removed.

In laryngotomy the insertion of the tube is seldom necessary. The membrane occupying the crico-thyroid space, being composed of the yellow elastic substance, contracts when divided, and prevents the closure of the opening; the more certainly if an incision be made upward so as to give the artificial opening the shape of an inverted **⊥**. If necessary, the angles with a portion of the thyroid cartilage, on each side of the perpendicular cut, may be clipped off; and also, as suggested, a portion of the cricoid cartilage in front may be removed. In this way, the artificial opening may be made considerably larger than the calibre of the trachea itself. Generally, we believe, it will be found that two strips of adhesive plaster applied, one on each side near the margin of the wound, (if longitudinally made,) and drawn backward and crossed behind the neck, will be all that is required to keep the wound patent.

In laryngotomy no anæsthetic is required; consequently, no risk from this cause need be incurred.

To this objection, as well as that already alluded to, the intolerance of the tube in the larynx, we beg leave to refer to the last June number of the London Lancet, in which will be found "Some cases of Laryngotomy, by John Erichsen, Esq.," which seem to be exactly in point. They derive additional value and interest from the fact that they were all cases of laryngitis. *In case first, he made an opening through the crico-thyroid membrane, and introduced a large silver tube.* On the third day, the tube was finally withdrawn, and the wound gradually closed; the patient recovered without a bad symptom. Case 2. Mr. Erichsen says, "I lost not a moment in opening the crico-thyroid membrane, and inserting a large silver tube, which she has never been able to lay aside. It has been worn for between six and seven years, and in close proximity with the vocal cords;" and, he continues, "the action of these has been in no way impaired." Pretty good evidence this, that the tube in the crico-thyroid space can be borne quite as well as in the trachea. Case 3. "A short, stout, thick-necked woman, about thirty years of age. There was not a moment to lose. I immediately proceeded to operate, but on making an incision through the integuments, the vessels of the neck, over-distended by asphyxial congestion, poured out so large a quantity of dark blood, that it was necessary to wait a few moments before opening the windpipe. During this delay the patient, who was seized with a severe spasm, ceased to breathe, and fell back to appearance dead. *I immediately plunged the scalpel through the crico-thyroid membrane, cut this freely across, and put in a large silver tube. She made a good recovery.*"\* These were cases of laryngitis: of course the opening and insertion of the tube were in the inflamed part, yet not only no inconvenience resulted, but the most perfect success followed. They annihilate the objections raised against cutting into the inflamed parts, and the intolerance of the tube in laryngotomy.

A few short extracts from cases reported in the London Lancet, (December, 1855,) by Henry Thompson, F.R.C.S., M.D., will close this paper: Case 1. "A man about forty years of age," with "an attack of acute laryngitis." "There was no time for delay. I proceeded at once to make an opening into the larynx, sufficient to admit a full-sized double-trachea tube. The relief was instantaneous." This occurred on the 27th of September; and on the "1st of October, the apparatus was removed, and the edges of the wound approximated;" which on the 8th "had entirely closed." "Case 2." "A little boy, three years of age, livid and almost insensible, struggling violently for breath. There was evidently no time to be lost. Opening first the crico-thyroid membrane, I found it necessary subsequently to divide the cricoid cartilage, and upper ring of the trachea, in order to introduce the tube. We had the satisfaction, however, of leaving him, in the course of half an

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\* The italicizing is ours.

hour, completely relieved, and enjoying comfortable sleep." The next day, "June 3d," he was breathing comfortably, taking nourishment freely, and in all respects improving. Contrary to express orders, the tube was removed for a short time by the attendants of the child on the 5th instant, and he suddenly died of asphyxia, in less than ten minutes after taking, with considerable relish, a basin of beef tea." Mr. Thompson very significantly and justly adds: "These cases are practically valuable, inasmuch as they present additional evidence in favor of an opinion, the accuracy of which is becoming more and more apparent, namely, that a tube may be introduced into the interior of the larynx, and be retained there for some time, without exciting irritation of the organ, even in the presence of acute laryngitis; and that it is therefore unnecessary to resort to the severer method of tracheotomy, on the assumed ground that it is calculated to occasion less disturbance to an already diseased larynx.—[*New York Medical Times*.

*Treatment of Pseudo-membranous Angina.\* by the Alkaline Carbonates.* (Translated from the "Gazette des Hôpitaux," April 7th, 1855, for the Boston Medical and Surgical Journal.)

The solvent action attributed to the alkalies, upon the fluids of the body, and particularly upon certain abnormal products of secretion, has already been taken advantage of in quite a large number of diseases. We are not sure whether pseudo membranous angina figures among the great variety of affections to which this treatment has, of late years especially, been applied; our recollections on this point are not exact. Were this so, however, the interest which attaches to the case recently communicated to the Academy of Sciences, by M. Marchal (de Calvi,) would be none the less real. Its clinical and practical bearing gives it naturally a place in our pages.

Starting with the idea that the principle which is the cause of the disease known under the name of pseudo-membranous angina [*angine couenneuse*] is unknown to us, but manifests itself by a phenomenon, the formation of false membranes, indicating an excess of plasticity in the blood; and regarding this excess of plasticity, if not the immediate cause, the most striking phenomenon of the pathology of the malady, at least the fact which nearest approaches it, and to which, consequently, we must address ourselves, in order to attack the evil as nearly as possible to its source, M. Marchal had for a long time, he says, conceived the idea of resorting in such cases to the employment of alkalies, without, at

\*The French expression, *angine couenneuse*, is one which it is difficult to render satisfactorily in English, but the literal translation, which we have adopted, will be sufficiently intelligible. The disease is also called—pseudo-membranous inflammation of the fauces, membranous angina, diphtheritis, &c. The latter synonym was introduced by Bretonneau, by whom the precise nature of the disease was first satisfactorily made known.—[TRANSLATOR.]



the same time, neglecting the inflammatory indications. This he has done successfully in the following case, which we give in his own words, adding that we adopt the conclusions of our *confrère*, with the reservations which he has made.

"M. B., Chief Engineer of the Vincennes Railway, was attacked in the beginning of March, 1855, with a sore throat, which at first appeared slight, but which rapidly grew worse. When first called, at the beginning of the attack, I prescribed simple remedies. The next day, the inflammation was much more intense; the mucous membrane of the posterior fauces was very red and oedematous; the suffering very acute both in the posterior fauces, and in the sub-maxillary regions, and much increased by the act of deglutition. But what especially struck me, and from the first glance caused me the greatest uneasiness, were streaks of a pearl-white color, on the surface of the tongue, and more particularly on the palatine mucous membrane, and that of the tonsils (which were not much swollen,) forming by their agglomeration very evident patches, concerning which there could be no mistake. It was, in fact, the product of a plastic exudation; only, in the mucous membrane of the throat, the product was interstitial, in other words it had not passed through the epithelium; whereas, on the tongue, the false membranes, one of which was of the size of the nail of the little finger, were superficial. I endeavored, for the sake of greater certainty, to scrape off one of these spots from the soft palate; I was unable to do so, and the effort occasioned in the patient a violent attack of vomiting. He complained of extreme distress in the posterior part of the nasal fossæ, which attained its height during the action of deglutition. The pulse was 130, large and soft. On account of the greater number of cases of eruptive fever which existed at that time, the idea of commencing scarlet fever naturally presented itself to my mind; but, on the one hand, the mother of the patient had died (in 1845,) of an attack of pseudo-membranous angina, and it is well known that this form of angina may be called a family disease. On the other hand, the plastic infiltration of the pharyngeal mucous membrane, and the false membranes on the surface of the tongue, were unmistakable. Diphtheritis then existed, and in a man hereditarily predisposed, there was reason to fear that this affection, arresting the scarlatinous eruption, would pursue its course, the same as if it were idiopathic.

"I therefore decided to apply leeches, in order to diminish the inflammation, and to give the bicarbonate of soda, in large and often-repeated doses, to counteract the excess of plasticity of the blood. I prescribed twelve leeches to the submaxillary regions (six on each side,) and 12 grammes (3 drachms) of bicarbonate of soda, in twelve powders, one to be taken every half hour, in a spoonful of sweetened water.

"This was at nine o'clock in the morning. At one o'clock, the

patient had taken 8 grammes (2 drachms) of the bicarbonate. The leeches had drawn a large quantity of blood, which still flowed abundantly, evidently less plastic than in the normal state. As to the throat, the appearance of things was astonishing, and afforded me as much surprise as pleasure. The false membranes on the tongue remained, surrounded by a pultaceous, dirty-grey layer, which also covered the gums, where it was white; but the plastic infiltration of the posterior fauces had completely disappeared; not a trace of it was left. In the space of four hours, a most alarming state of things, capable of inspiring the deepest anxiety, had wholly subsided. Was this owing to the influence of the bicarbonate of soda? Such is my opinion.

"In the evening, red points appearing upon the skin, announced the scarlatinous eruption, which was general and intense, and which had hardly begun to fade before it was followed by a military eruption of white, serous vesicles, very close together, on the neck and arms, accompanied by short paroxysms, during which the heart beat violently, as in the *suetle*.

"I return now to the essential point in this communication, the disappearance of the diphtheritis in the throat, under the probable influence of an alkaline salt. In the first place, no conclusion can be established in therapeutics from a single case. Moreover, this instance is not so demonstrative as we could wish, since in my patient the diphtheritic angina was connected with scarlatina, and the pseudo-membranous angina of scarlatina is much less grave than the idiopathic variety. But, as I have already observed, there was one circumstance, its hereditary character, which gave to the angina, although scarlatinous, a peculiar gravity. Besides, when we reflect upon so sudden a disappearance of the diphtheritis, after the administration of the bicarbonate of soda, we can hardly fail to see in it an effect and a cause; and we may ask whether the same effect would not take place in idiopathic diphtheritis.

"I have said that the object of the alkaline salt was to counteract the excess of plasticity in the blood; it might also have another mode of action, a local or direct effect upon the diphtheritis. This did not escape the attention of M. Trousseau, to whom I communicated the case, which so much interested him that he desired to try the alkaline carbonates in the treatment of pseudo-membranous angina. The local effect which I have mentioned is easily understood, since a gramme (15 grains) of bicarbonate of soda, in a teaspoonful of water, is rather hard to swallow, and 'scrapes as it goes down,' according to the expression of the patient."

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*Blancard's Pill of the Iodide of Iron.*

Five years ago, M. Blancard, a pharmacien of Paris, proposed an unchangeable pill of the iodide of iron, made directly from its elements, which was officially approved by the French Academy

of Medicine. The excellence of this preparation was generally acknowledged, and it is already, in France, the most common form for the administration of iodide of iron. Our pharmaceutical authorities at Philadelphia, however, adhere to the saccharine solution which Dr. Jackson introduced many years ago, and Prof. Bache declares that the solid iodide "might well be dispensed with." Practitioners will differ sometimes from the chemists, and so it has proved in this case. It is found that, notwithstanding the assurances of the self-constituted authorities, the syrupy solution of iodide of iron, *does* undergo change: that it often injures the teeth, disagrees with the stomach, and contains free iodine. Consequently, as our dispensatory-authors and colleges of pharmacy simply advise us, if we must have a pill, to evaporate their syrup, or to use the antiquated and unreliable process of Callond, practitioners have found it of advantage to import M. Blancard's preparation, which is now very commonly prescribed, not only in New York and Boston, where there are agencies for the sale of it, but in many remote country towns. And here we may take the liberty of recommending to the gentlemen who have taken on themselves the direction of pharmaceutical matters in this country, that they should not be too dictatorial or dogmatic, if they expect to retain the authority which has been conceded to their talents and learning.

With these preliminaries, we give at length the process for preparing Blancard's pills, which we take from the *Bulletin de l'Academie de Medecine*. It is founded on the volubility of ether, and the insolubility of the iodide of iron in this vehicle:

Take of iodine *seventy-seven grains*; Iron filings *thirty-seven grains*; Distilled water *two and a half drachms*; Honey *one drachm and thirty-four grains*; Absorbent powder (say powder of Althæa) *a sufficient quantity*. Make 100 pills.

Place the water, iodine, and iron in a Florence flask; shake the vessel as the reaction takes place; filter the green liquor that results, into a small iron capsule, the weight of which is known. Wash the flask, and filter with two and a half additional drachms of water, slightly sweetened with a portion of the honey to be used in making the pills. Pour both liquids into the capsule, and evaporate, at first rapidly, then at a gentler heat, until the weight of the mixture is equivalent to the combined weight of the iodine and the honey (171 grains, or 3iij. nearly). Add a sufficient quantity of powdered althæa root, or, still better, equal parts of althæa and liquorice powder, about 3ij. Divide the mass into four equal parts; roll each part in powdered iron. Make each mass into a cylinder on an iron slab; divide each cylinder into twenty-five pills, and roll each pill in powdered iron, to cover the iodide exposed by the spatula. Expose the pills to a gentle heat that they may contract no moisture, and proceed at once to the second part of the process—varnishing the pills.



Make a solution of balsam of Tolu in three parts of ether. Place the pills in a porcelain capsule, pour on them a portion of the ethereal tincture, and impress a rapid motion of rotation, that the pills may be moistened on every side, and that the ether may evaporate rapidly. As soon as the pills begin to stick together, throw them on a dry surface, separating those that are agglutinated and leave them exposed to the air for twenty-four hours; then dry them over a stove at a gentle heat.

It is well to give them a second coating of varnish. Blancard puts them in a bottle with a stopper covered with silver, which is at once tarnished by the vapor of free iodine.

Each pill contains about one grain of iodide of iron, and one-fifth of a grain of powdered iron on its surface. Two to four pills daily is the ordinary dose in chlorotic, scrofulous, tuberculous and syphilitic diseases.—C. E.—[*Gazette Med. Sardin.* *Buffalo Med. Jour. and Month. Review.*

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*The Simplest Operation for Uncomplicated, Congenital Phymosis.*  
By T. FURNEAUX JORDAN, Esq., M. R. C. S.

Not only are Surgical authorities of opinion that circumcision is rarely, if ever, necessary; but those truly frightful slits, extending half-way up the penis, to be seen in the pretty engravings which adorn some (of our best, too) Surgical manuals are fast getting into chirurgical disfavor. The present mania, however, of attributing uncomplicated, congenital phymosis in every case to the unfortunate mucous lining of the prepuce alone, and the practice of heroically slitting up the same to the very point of its reflection from the penis, has arisen rather from the hypothesis of theorists than from the enlightened experience of acute observers.

The non-dilatability of the congenitally phymosed prepuce is confined to the margin of the preputial orifice and to the skin and mucous membrane in its immediate vicinity; such non-dilatability undoubtedly extending to a greater distance on the inner than on the outer aspect of the foreskin.

The received opinion, touching the non-elasticity of the preputial lining in its entire extent, is so far from being correct, that ordinarily such lining, for some distance anterior to its point of reflexion, is arranged in rugous folds, like all other mucous membranes that are too large for the organ they line, save when the peculiar function of that organ is being exercised.

The opinion that the skin is not implicated in phymosed stricture, is equally incorrect. In one patient, on whom I operated with complete success, by far the tightest portion of the prepuce, after recovery from the operation, was the skin for two lines behind the cicatrices.

From the above remarks, it will be inferred that any incisions, which extend further than the parts forming the margin of the prepuce, and for a short additional distance on the mucous surface, are unnecessary, and hence cruel. A single incision, however, as described, would fail to secure the retraction of the prepuce, not because the incision is too limited, but because a single incision cannot possibly relieve the whole circumference of the congenitally contracted preputial orifice; two, however, or at most three, of the small incisions in question would afford complete relief.

The mode of operating which I have adopted, and with signal success in its results, is this:—Having first induced local anæsthesia, by applying pounded ice to the penis for two minutes, I introduce one blade of a pair of scissors (blunt-pointed, yet cutting to the end) to the distance of  $\frac{1}{4}$  an inch, between the glans penis and the prepuce, on one side of the penis, at a point midway between the frenum posteriorly, and the mesial line anteriorly. Both layers of the prepuce being divided to the extent mentioned, a similar incision is made at a similar point on the other side of the penis. The prepuce is now retracted to the extent allowed by the incisions, which by this proceeding are brought quite external, enclosing between their lips an uncut layer of lining membrane. This is divided on each side, by introducing one blade of the scissors, to the extent of, and immediately under, the original wound. The entire prepuce may then be retracted, a piece of wet lint wrapped round the penis, and the whole supported by a proper suspensory bandage. The patient need not lie in bed. Where three incisions seem preferable, they should be equidistant from each other, the third being at the mesial point anteriorly, the two lateral incisions should be a little nearer the frenum, than when two only are made.

The incisions may of course vary a line or two, one way or the other in extent, according as the constriction is more or less aggravated.

The recapitulatory points to which I would draw attention, are:—

1. That the skin is more, and
2. That the mucous membrane is less, involved, than is generally supposed.
3. That two, or at most three, comparatively small incisions will afford complete relief.
4. That no assistant is required, and
5. No instrument save a pair of scissors.
6. Two or three small incisions cause much less irritation, and heal much more quickly than one large one.
7. That the patient need not lie in bed.—[*Med. Times and Gaz.*

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*Nitrate of Silver as a Remedy for Burns.* By JOHN WILT BANK, M. D., of Philadelphia.

I wish to call the attention of the readers of the Examiner to the value of the nitrate of silver as an application to burns and scalds. I have used it frequently both in deep and superficial burns, and I have been equally surprised and gratified by the results. The advantages of the caustic application are numerous. It furnishes a complete protection to the inflamed surface, subdues the pain, arrests the serous discharge, changes the character of the inflammation, promotes a speedy cure, and if I am not mistaken, prevents the formation of those ugly cicatrices and the irregular contractions of the skin which so often occur in the healing of burns.

The mode of application is simple. In superficial burns a strong solution—20 to 40 grains of the nitrate to the ounce of water—should be applied over the whole surface with a camel's hair pencil, vesications should be opened and the surface carefully wiped dry before the solution is applied. If the burn is deep and the discharge of serum abundant, the entire surface of the ulcer should be touched lightly with the solid stick.—[*Medical Examiner*.]

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*Formic Acid in the Blood of a Person, killed by the Inhalation of Chloroform.*

The following note, received from a source which entitles it to credit, will be read with interest.

"In the Journal of January 17th, an account of a recent death from chloroform in this city, was given. A quantity of the blood, removed at the autopsy, was placed in the hands of Dr. C. T. Jackson for chemical examination. He has ascertained that the blood contained formic acid, and that it could readily be separated by distillation in the heat of a chloride of calcium bath.

"Chloroform consists of formyle and three equivalents of chlorine; formic acid of formyle and three equivalents of oxygen. The three atoms of chlorine leave the chloroform and unite with the blood, while three atoms of oxygen leave the blood and unite with the formyle of the chloroform, replacing the chlorine and producing formic acid. Thus the blood is not only deprived of its oxygen, but it is so altered as to be incapable of absorbing vital air and the patient dies from asphyxia. The production of formic acid under such circumstances has never before been known, and of course it is to be regarded as an important physiological fact of no small practical moment."—[*Boston Med. and Surg. Journal*.]

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*Anæsthetics in the Austrian Army.*

A circular has recently been issued, ordering that in future, the army medical officers shall always employ, for the purpose of in-



ducing anæsthesia, a mixture consisting of one part chloroform and nine parts ether, this being the proportion long employed by Dr. Weiger, a Vienna dentist.—[*N. Y. Med. Times.*]

### *Pathology of Diabetes.*

M. Andral stated at the meeting of the Academy of Sciences (Paris) in July last, that in five cases of diabetes which he had examined after death, since the publication of the researches of M. Bernard, he had uniformly met with one alteration. He had found in each instance all the anatomical characters of a very intense hyperæmia, and different in its aspect from ordinary hyperæmia of that organ. The tissue of the liver of the diabetic patient, is everywhere gorged with a large quantity of blood. M. Andral regards this as being at the same time, a change peculiar to diabetes, and a proof of the sugarforming function of the liver.—[*N. Y. Med. Times.*]

## EDITORIAL AND MISCELLANEOUS.

*Another BEARDED Woman.*—Our city has been visited this month by another of those anomalous beings heralded as bearded women. The subject of this notice is announced as the "Bear Woman," "a most extraordinary nondescript," "a half-human half-beast creature," "otherwise called Julia Pastrana, a hybrid root-digger Indian, from California"!! The pamphlet sold at the door contains, as usual in such cases, certificates from "Dr. Mott" and other "distinguished physicians." We do not envy the taste of the "distinguished" members of our profession who would lend their names to such purposes of humbuggery. We are happy to say, however, that the valued and respected name of Valentine Mott is not among the certifiers. But, lest we might do injustice to the "distinguished" gentlemen, we beg leave to append their own language:

### *"Dr. Mott's Certificate."*

NEW YORK, December 3, 1854.

"Sir:—To naturalists alone we leave the task of solving the enigma concerning the origin of Julia Pastrana, the 'Semi-Human Indian,' which would have puzzled the Sphinx. From her uncouth gait, it may be conjectured that the mysterious animal moves as if an elongation of the Spinal column should have taken place, producing a tail, which in consequence of humanity predominating, has been denied.

"She is a perfect woman—a rational creature, endowed with speech, which no monster has ever possessed. She is therefore a HYBRID, wherein the nature of woman predominates over the brute—the Ourang Outang. Altogether she is one of the most extraordinary beings of the day.

"I remain yours respectfully,

ALEX. B. MOTT, M. D."

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*"From Professor Brainerd.*

*"CLEVELAND, August 5, 1855.*

"Sir:—In compliance with your request, I will state that I examined the hair of the specimen of the GENUS HOMO which you have in charge, and compared it with the hair of the African, under a high magnifying power, and from this comparison, have no hesitation in saying that the individual in question possesses, by this test, NO TRACE OF NEGRO BLOOD. Her other peculiarities, the hair upon the body, its length and structure, the form of the mouth and nose, the size of her limbs, peculiarity of her breasts, &c., and various other features, entitle her, I think, to the rank of a DISTINCT SPECIES. Yours, truly,

*"S. BRAINERD, M. D."*

We must leave it to others to say how "a perfect woman" can be "a Hybrid, wherein the nature of woman predominates over the brute—the ourang outang," to say nothing about the sapient conjecture of "the elongation of the spinal column" which "should have taken place, producing a tail." It is assuredly not surprising that whole communities should be duped, when men in high places, and therefore supposed to be well informed, certify to such nonsense. We do not know the meaning attached by the certifiers to the word *Hybrid*, and will not stop to discuss the value of this term as applied to varieties of the human family, or to mixed races; yet, notwithstanding their opinion as based upon an inspection of the hair, we think this woman's flattened nose, thick lips, projecting jaws, and swarthy complexion, testify unmistakably to the infusion of negro blood in her veins. Her straight hair is like that of our savage, or other branches of the red family, who probably furnished the other element of her origin. Be this as it may, Julia Pastrana is an exceedingly homely bearded woman, and nothing else. Her arms and shoulders are not more hairy than those of many men. The whole of her forehead, nose and face is covered with a downy beard about one-eighth of an inch in length, but which, beneath the chin, reaches two or three inches. There is nothing uncommon in her person nor in her gait.

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*Medical College of Georgia.*—The Commencement exercises in this institution took place on the 3d day of March. The Dean reported that "there were one hundred and seventy students in attendance upon the course of Lectures just concluded; of whom 119 were from Georgia, 22 from Alabama, 18 from South Carolina, 5 from Mississippi, 2 from North Carolina, 2 from Florida, 1 from Texas, and 1 from Nova Scotia." The Degree of Doctor of Medicine was then conferred by Ex-Governor WM. SCHLEY, President of the Board of Trustees, upon seventy-three gentlemen, and the Honorary Degree of Doctor of Medicine upon Dr. JOHN HARWOOD BURT, of South Carolina. An able and appropriate Address to the Graduates was then delivered by the Rev. Mr. RYERSON, which was followed by a chaste

and eloquent Valedictory by Dr. W. L. M. HARRIS, of the graduating class. These interesting proceedings were attended by a large and respectable concourse of ladies and gentlemen. The Graduates were :

## FROM GEORGIA :

|                    |                   |                |
|--------------------|-------------------|----------------|
| A. G. W. Stephens, | R. T. Barton,     | O. S. Means,   |
| J. G. Brown,       | Benjamin Garrett, | E. M. Newman,  |
| G. F. Smith,       | J. L. Eshom,      | J. S. Beazley, |
| T. A. Boddie,      | J. D. Young,      | A. C. Neal,    |
| W. L. Selman,      | J. G. McMath,     | W. M. Greene,  |
| G. T. Clarke,      | J. T. Dismukes,   | C. L. Blair,   |
| William Goulding,  | Z. C. W. Davis,   | J. J. Hardin,  |
| Thomas Burdell,    | S. J. Robert,     | T. B. Ford,    |
| J. O. Holloway,    | Joseph Wise,      | J. W. Cochran, |
| W. R. Murphey,     | J. H. Wallace,    | J. M. Dent,    |
| T. M. C. Rice,     | J. R. Powell,     | J. W. Proctor, |
| H. N. Mitchell,    | J. M. Burns,      | H. W. D. Ford, |
| G. W. Walker,      | D. A. Mathews,    | J. M. Mathis,  |
| J. C. Orr,         | W. L. M. Harris,  | John S. Bell,  |
| A. W. Henley,      | J. D. Moore,      | A. M. Parker,  |
| Thomas Searls,     | V. H. Shelton,    | I. J. M. Goss, |
| T. W. Tison,       | O. H. P. Slaten,  | A. C. Mathews. |
| Asahel Beach,      |                   |                |

## FROM SOUTH CAROLINA :

|               |                 |               |
|---------------|-----------------|---------------|
| M. C. Cox,    | B. W. Glover,   | D. T. Riley,  |
| J. L. Hughes, | T. E. Jennings, | Charles Agar, |
| G. W. Wasson, | W. T. McFall,   | A. J. Nagel,  |
| J. J. Scott,  |                 |               |

## FROM ALABAMA :

|                |                    |                  |
|----------------|--------------------|------------------|
| W. C. Neal,    | G. W. D. Lawrence, | Job Thigpen,     |
| J. T. Handley, | Elias Davis,       | L. M. Underwood, |
| M. A. Roach,   | J. W. Smith,       | J. F. Reynolds.  |

## FROM TEXAS :

J. W. Veazey.

## FROM MISSISSIPPI :

D. S. Watts.

*Medical College of Savannah.*—The following gentlemen received their diplomas at the commencement, on the 6th March :

E. L. Burton, J. S. Butts, Thomas Charlton, John Eckhard, James Godfrey, D. O. C. Heery, G. P. Padelford, R. W. Skinner, R. E. Campbell, J. H. Hendry, J. S. Thomas, and A. A. Watts.

*Oglethorpe Medical College.*—The first annual commencement of the Oglethorpe Medical College of Savannah, took place on the 8th March. The following are the names of graduates :

John W. Barber, S. D. M. Byrd, James A. George, J. J. Jones, W. J. Orr, Wm. M. Marsh, John A. Mayer, and John A. Owens.



*Savannah Spring School of Medicine.*—An organization under the above name has been formed in our sister city. The term of Lectures is to be from the middle of March to the end of June. The lecturers are Holmes Steele, M. D., on Obstetrics, the Physiology of Generation, and Diseases of Women and Children; John M. Johnson, M. D., on Medical Chemistry and Materia Medica; Joseph J. West, M. D., on Anatomy, the Physiology of the Viscera, &c.; and Charles H. Colding, M. D., on Minor and Operative Surgery. Fee \$50, in advance.

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*Medical Society of the State of Georgia.*—The next annual meeting of this Society will take place on the 9th April, at Macon.

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*The American Medical Association* will convene at Detroit (Michigan) on the 6th of May.

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*A protection against Puerperal Fever.*—A case of labor recently occurred in the Boston Lying-in Hospital (reported in the Boston Medical and Surgical Journal,) which Dr. H. R. Storer was called to attend. Having that day seen a severe case of Erysipelas, and believing that he might impart the infection to the woman and thereby induce puerperal fever, he declined going. Compelled by circumstances to go, however, he determined to put the female upon the use, as a prophylactic, of 15 drops of mur. tr. of iron, every six hours. Although he had to extract the placenta with his hand, no bad results followed, and the iron was discontinued on the fifth day. Dr. S. regards the case as confirmatory of the efficacy of the preventive treatment, already recommended by others.

Although the production of Puerperal fever in the way just alluded to, is still a mooted question, there is a growing disposition on the part of the profession to admit the fact—and we should therefore not omit a resort to any measures of prevention that may be proposed, especially when these are in themselves harmless.

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*Works received.*—We acknowledge the reception of the following works: Report of the Pennsylvania Hospital for the Insane, for the year 1855, by Thos. S. Kirkbride, M. D., Physician of the Institution. The American Journal of Science and Arts, (full of valuable matter as usual). An Essay on Intermittent and Bilious Remittent Fevers, with their Pathological relation to Ozone, by E. S. Gaillard, M. D., of Charleston, S. C., (a very interesting and creditable production). Treatment of Displacements of the Uterus with the Abdominal Spring Pessary, by J. McF. Gaston, M. D., of Columbia, S. C., (an ingenious contrivance to obviate some of the many objections to such instruments). A Paper on the Effects of Lead on the Heart, by John W. Corson, M. D., of New York, (a valuable paper on a subject but little un-

derstood). A Tabular View of the Signs furnished by Auscultation and Percussion. and their application to the Diagnosis of Diseases of the Heart and great Vessels, 2d ed., enlarged and improved, by O. Bellingham, M. D., (a great convenience to students). Also, a number of Introductory Addresses, Circulars, &c.

*American Physicians in Russia.*—There are at present twelve American doctors serving in the Russian army in the south of Russia. Eight of these doctors, Marshall of California, Smith of New Orleans, Weems, Hank and Johnson of Baltimore, Md., Hart of Memphis, Tenn., Parks of Illinois, and Clarke, of New York, are stationed at Simpheropol, in the Crimea. Drs. Bostwick, of New York city, Oliver, of Boston, Mass., Morton, of Nashville, Tenn., and Smith, of Vermont, are stationed at Odessa. Thirteen others have served in the Crimea, of whom five have died there; seven have returned, and one died at Berlin, on his way to America. Dr. Draper, of New York, died of typhus fever at Sebastopol, on the 19th of March, 1855. Dr. King, of Charleston, S. C., died of typhus fever at Kertch, on the 20th March, 1855. Dr. McMillan, of New Orleans, died of cholera at Sebastopol, in June, 1855. Dr. Jones, of Maryland, died of cholera at Simpheropol, on the 24th of October, 1855, and Dr. Deninger, of Reading, Pa., died of cholera at Simpheropol on the 25th of October, 1855. Dr. Stoddard, of Baltimore, Md., died at Berlin, on the 21st January, 1856. Over the graves of Drs. Jones and Deninger, a very pretty monument has been erected by their comrades, and at the time of the taking of Kertch by the allies, a monument to Dr. King was in process of construction, the monument being erected by the city authorities. Drs. Harris, of New York, Turnipseed and Davega, of South Carolina, Henry, of Mobile, Ala., Eldridge, of Maryland, Read, of Norristown, Pa., and Holt, of Georgia, have retired from the Russian service.—[*Cor. N. Y. Herald.*]

The March number of the New York Journal of Medicine, contains an able paper from the pen of Dr. John W. Corson, "On the Effects of Lead on the Heart," in which the author arrives at the following conclusions:

1.—That allowing a due excess of force to carry on the embarrassed circulation in organic affections of the heart, it appears that certain symptoms in slow poisoning from lead, as well as in cardiac disease proper, typhus fever, and apparent death from catalepsy or other causes, all tend to prove that, as a rule, the *impulse* may be termed the *pulse of the heart*; and that, its more careful study than heretofore, may aid us in the general diagnosis and treatment of disease.

2.—That the symptoms of weakening of the heart in lead poisoning, are confined to cases of *partial paralysis*, or *general muscular debility*, accompanied usually by the purple streak of the gums, indigestion, constipation, pains in the head, muscles, or joints, and sometimes by lead jaundice; and that commencing and emphasizing with the most frequent, these heart symptoms from lead are:—*weakened or soft tapping impulse*; *faintness on unusual exertion*; feeble and generally slow pulse; palpitation; cardiac uneasiness; and to these are occasionally added, great despondency

or morbid fear of death; suspicions of organic disease of the heart, fainting fits, night-mare, or troubled dreams.

3.—That these depressing heart symptoms are absent in the earlier and more acute stage of lead poisoning, known as "*lead colic*," when, on the contrary, the stimulus of pain generally renders the impulse of the heart and the pulse at the wrist more firm than natural.

4.—That skill in the detection of minute variations in the impulse of the heart, naturally requires a little careful attention and practice.

5.—That these debilitating effects of lead most commonly occur in hearts previously sound, but they sometimes complicate existing organic cardiac disease from rheumatism or other causes.

6.—That the agencies or causes of lead poisoning are very numerous, and often obscure; and that slighter cases supposed to be ordinary dyspepsia, constipation, debility, or bilious colic, are frequently undetected.

7.—That the above tests of the immediate influence of lead on the heart in disease, are further corroborated by experiments upon animals; showing that, more mildly and slowly, *lead*, like digitalis, oil of tobacco, upas antiar, the woorara, and some other poisons, tends specially to paralyze the central organ of the circulation, and, like these, ultimately to produce what Bichat termed "*Death by the heart*."

8.—That the remedies for the paralyzing influence of lead may be divided into two classes:—*Disinfectants*, such as the iodide of potassium, and preparations of sulphur; and *Antiparalytics*, such as strychnia and electricity; that the best treatment combines these two elements; and that, on the whole, the most convenient and efficacious are free doses of the iodide of potassium, and minute proportions of strychnia or nux vomica.

9.—That the above conclusions are founded mainly on the evidence of ten cases, principally among the badly-nourished and improvident poor finally resorting to public institutions; and they may possibly be somewhat modified in future by more extended observation in private and more favorable practice.

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*Vaccine Matter.*—As it may be interesting to physicians to know where fresh vaccine matter can be obtained, we insert the following:

"Physicians wishing Vaccine virus, by addressing Dr. Wm. Hutson Ford, City Vaccinator, Charleston, S. C., and enclosing one dollar, will receive, by return mail, ten points, or a set of glasses charged with fresh virus; or, by particular desire, a recent scab. Seventy-five points, or seven sets of glasses, will be sent for five dollars."

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*Results of some Statistical and Physiological Researches on Twins.*—At a meeting of the French Academy of Sciences, Nov. 26, Mr. Baillarger read a paper containing the results of some statistical and physiological researches on twins. We have thought the subject presents some features which might interest the readers of the Examiner.

"Numerical distribution and relative proportion of the sexes in twin births; hereditary influence.

"I. The facts group themselves into three categories:

"The first, two boys at a birth.

"The second, two girls at a birth.



"The third, a boy and a girl.

"The result obtained in computing 256 double births shows:—

|                         |   |   |   |   |   |            |
|-------------------------|---|---|---|---|---|------------|
| Two boys in             | . | . | . | . | . | 100 cases. |
| Two girls in            | . | . | . | . | . | 58 "       |
| One boy and one girl in | . | . | . | . | . | 98 "       |

"It would seem as if the presence of two boys in twin pregnancies is almost twice as frequent as that of two girls. And also that the third class, that of the presence of the two sexes, is almost equal to the first.

"II. The solution of the second question, viz: the relative proportion follows from the above figures.

In 512 twin children are found: Girls, 214; Boys, 298.

"The number of boys exceeds that of girls, therefore, by more than one third. This result will certainly seem remarkable if we bear in mind that the proportion of the sexes in the totality of ordinary births, is of 16 girls for 17 boys. So that the difference is in the one case more than a third, and in the other, only a sixteenth. The relative proportion of the two sexes is governed then in twin pregnancies by special laws, quite distinct from those which govern normal births. This fact, interesting in itself, becomes still more so when compared with the documents already collected by M. Flourens on the proportion of the sexes in animals, in which the predominance of males over females is one sixth instead of one sixteenth. I would connect the great predominance of the male sex in twin births with another fact, which is deduced from the general statistics of births, and which at first sight may seem strange. I refer to the far greater proportion of boys among still-born children. This amounts to 17 boys to 12 girls. This singular predominance of boys among still-born children can, in my opinion, be in part if not fully accounted for by the excess of the male sex in twin births, which furnish, as is well known, a pretty considerable contingent to the statistics of still-born children.

"III. Twin births are hereditary in certain families, but in different degrees and different conditions. A large number of facts show, that the daughters of mothers who have had twin pregnancies, have often themselves two children at a birth. This disposition occasionally passes over one generation, when the grand-daughter instead of the daughter has one or several double pregnancies.

"The facts which I have collected would seem to prove that this hereditary disposition is transmitted also through the male. Some men would thus have the faculty of procreating two children at once, although no such hereditary disposition existed in their wives. This fact would have a great physiological importance, and I admit that it should be based on indisputable proofs. I merely indicate it now, and will return to it in a future paper.

"Before closing, it may not be improper to call attention to the fact, that the hereditary disposition of which I have been treating, seems to have been taken advantage of to obtain among animals, species which procreate two young instead of one. Flocks of sheep have thus been formed, consisting of individuals which normally bear two lambs. Single birth among them become the exception instead of the rule. I have seen a flock composed of nearly one hundred head of sheep, of which each ewe annually brings forth two lambs."

Robert Collins, in his *Practical Treatise on Midwifery*, gives the result of 16,654 births, occurring in the Dublin Lying-in Hospital, during a period of seven years, from 1826 to 1833. Among these, as appears in a table, pages 164 and following, (Am. Ed.,) there were 240 twin births, in which the sex of the children is mentioned. By a computation of this table, we arrive at results relative to the numerical distribution and proportion of the sexes, materially different from those which Mr. Baillarger's facts would lead us to expect. Thus in 480 twin children, there were: Girls, 234; Boys, 246; distributed in the following manner:

|                         |           |           |
|-------------------------|-----------|-----------|
| Two boys in             | . . . . . | 73 cases. |
| Two girls in            | . . . . . | 67 "      |
| One boy and one girl in | . . . . . | 100 "     |

By these figures, the presence of two boys in twin pregnancies is only one-eleventh more frequent than that of two girls, and the presence of the two sexes is more than one-fourth more frequent than that of two boys. The number of boys exceeds that of girls by only one-fifteenth, a result but little larger than that obtained from the totality of ordinary births, viz: one-sixteenth.

On the other hand, if we turn to the statistics of the same Hospital, as reported by Alfred H. McClintock and Samuel L. Hardy, for the three years of their connection with the Institution, from Jan. 1st, 1842, to Jan. 1st, 1845, (*Practical Observations on Midwifery*, p. 329,) we find that during that period, there were 6,634 births, of which 95 were twin births. In these there were: Girls, 79; Boys, 111; distributed thus:—

|                         |           |           |
|-------------------------|-----------|-----------|
| Two boys in             | . . . . . | 38 cases. |
| Two girls in            | . . . . . | 22 "      |
| One boy and one girl in | . . . . . | 35 "      |

Here we are struck with the similarity of the relations existing between the above figures and those which Mr. Baillarger found to exist between the facts collected by him.

The presence of two boys is eight-elevenths more frequent than that of two girls, while in Mr. B.'s cases, it is twenty-one twenty-ninths, or the same thing.

The presence of the two sexes is less than that of two boys, as with Mr. B., though not quite so near being equal.

The number of boys exceeds that of girls more than one-third, as in Mr. B.'s cases, the ratio differing but a unit.—[*Medical Examiner*.]

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*Albany Medical College.*—The donations to the Albany Medical College have amounted to \$75,000. Of this sum, \$50,000 have been expended in buildings, land, and for the support of the institution during the four years of its existence—leaving a surplus of \$25,000. Thirty gentlemen of Albany contributed to its permanent endowment \$1,000 each.—[*N. Y. Med. Times*.]

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*Asylum for Inebriates.*—A petition is before the Massachusetts Legislature, praying for the establishment of an Asylum for Inebriates, wherein they may receive such treatment as shall restore them to soundness of health and sanity of mind; and also to afford such facilities as shall render the asylum a self-supporting institution.—[*Ib.*]

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## ORIGINAL AND ECLECTIC.

### ARTICLE XIV.

LETTERS FROM SAML. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.  
LETTER NO. 11.

MONTGOMERY, ALA., March 20th, 1856.

*Messrs. Editors*—In a few prefatory remarks in my first letter I stated that I had no motive in offering my views upon certain medical subjects to the profession, beyond a desire to add my testimony to the truth or falsity of the principles and the practice of medicine in the present day, which, of course, will be understood as being confined within the limits of my own observation and experience, otherwise I should consider my testimony as worthless, and would have spared myself the trouble of writing it out, and you of reading it; and I may add, that this desire is strengthened by a sense of duty which I think is incumbent upon every man, who has devoted the greater portion of his life to the alleviation of the sufferings of his fellow beings, (especially if he is conscious of having been generally successful,) to let his views and plans (by which he has accomplished the greatest good) be known, whether they have resulted from his own unaided observation and experience, or whether he has acted merely upon the suggestion of others, and followed out plans which had already been laid down for his direction.

Now, the testimony which I have to offer in favor of the value and efficacy of calomel in the treatment of most of the malignant



fevers, and other diseases of our climate, though by no means novel or original, is nevertheless the result of my own experience, and more particularly is it so with regard to the modes of its administration, and the peculiarity of its effects, according to the manner of its administration. I can *not* expect, however, that my testimony will be received by the profession with much favor, when there are so few who have the boldness and independence to avow themselves the advocates of its use, or, are willing that the *world* should know, or believe, that they ever used it at all in their practice. Some such *I wot of*, who boldly *discard* this, and other cardinal remedies, and endeavor to foist upon the profession, as their substitutes, such articles as phosphorus, bryonia, and aconite! Well, it is not for me to say who shall believe, and who not; it is only my business to testify, and all that I ask of the profession is to award to me the candor and honesty of purpose equal, at least, to my zeal and devotion to my profession, the honor and dignity of which I have so long endeavored to uphold.

In my last letter, I gave, in support of my views upon the uses of calomel, some testimony which was very good as far as it went, and upon high authority. But Dr. Wood, upon some of the most important points, namely, the use of large doses of calomel, gave us only heresay evidence. I now introduce a witness, who is not only able to testify to all the points which I wish to establish, but he does it from his own knowledge, which renders his testimony the more valuable. Doct. Jno. E. Cook, whose general principles I can not endorse, on account of his extravagant and ultra *cathartic* notions, which were at one time very popular in the western country, has done more to bring calomel into disrepute, by combining it with drastic cathartics, than by the quantities used, which were often unnecessarily and extravagantly large, notwithstanding which, his observations with regard to its peculiar properties, its mode of action, its value, and efficacy in certain diseases and conditions, will be found to be correct, by any one who has the boldness to test them by practice; and those who have not, are not competent to sit in judgment upon them. His general views, with regard to the cathartic action of calomel, are, that it draws directly from the biliary ducts, and relieves the vessels of the liver, and others connected with it, of engorgement or congestion; while ordinary cathartics draw upon the *arterial capillaries*, which open upon the internal surface of the intestinal canal. But I will let

him speak for himself. As a cathartic, he says: "Calomel is slow in operation, often requiring twelve hours; it does not operate frequently, but the discharges are large; it gripes little or none, in general, and is perhaps the most effectual medicine known in producing consistent discharges from the biliary ducts." Speaking of the difficulties often to be encountered in the treatment of autumnal fevers, Dr. Cook says: "These are a great disposition to serous discharges from the bowels, . . . and extreme irritability of the stomach, in consequence of which almost every medicine is rejected as soon as swallowed." Now, these conditions I have seen presented by the opponents of calomel, as cases unsuited to the action of calomel, and they have argued that calomel, not only aggravated, but often produced them.

But I have no doubt that in these cases, as in many others, calomel has been made to bear the sins of other remedies with which it has been coupled or combined. A notable instance may be found in Wood's Practice, which deals calomel a hard blow, on account of the quarter from which it comes. Under the treatment of Pernicious fever we find the following:—"Not long since, under the notion that congestion was the evil to be encountered, *copious bleedings* and *large doses of calomel* were the remedies most relied on by many practitioners. Experience, however, has proved the frequent inefficiency and even *danger* of this practice, and the profession generally are rapidly abandoning it." In this case, it is very certain that calomel has to suffer for being caught in *bad company*, as, on the next page, we find its character somewhat cleared up by the following sentence: "Another remedy which is *decidedly* called for, is calomel." But to return. My experience is most decidedly with Dr. Cook, who says, "The disposition to serous discharges is readily overcome by the use of calomel; *and it is a remedy that will not fail*. There is *almost no danger* of exciting pytalism, while these serous discharges continue, and therefore there *ought to be no hesitation in administering calomel, until dark and consistent discharges are obtained*. If the case is urgent, from a scruple to a drachm should be given at once, in order to obtain the desired effect as speedily as possible, and repeated, according to the necessity of the case." Of irritability of stomach, Dr. Cook says, "In some cases there are incessant and violent efforts to vomit for days together, or even until death. I have, in these circumstances, given, with the best effect, a drachm of calomel. It

produces a copious, tenacious, or viscid discharge, of a deep green or nearly black color, and affords the most marked relief. It very frequently happens that a physician will not venture, as he terms it, to give so large a dose, but will not hesitate to persist for days in repeating small doses, until they far exceed the quantity which, given at once, would have completely succeeded; thus the risk of salivation is incurred, without obtaining the full benefit of the cathartic operation; for it is to be remembered, that *one or two large doses* often so completely remove the irritable state of the stomach, that the case may be afterwards managed without calomel. . . It is exceedingly rare to find a patient require more than a dose or two, of the size above mentioned, to effect the object in view."

For fear that I may be accused of having borrowed my views, with respect to calomel, from Dr. Cook, I will state that, until very recently, I had never read a page from that author in my life. A young professional friend, knowing that I was engaged in writing out my views, and knowing also that I entertained opinions, which, if not peculiar, were not entertained generally by the profession, and supposing that I might find something corroborative or confirmatory of my views and opinions, placed his book in my hands, in which I find so much, which so perfectly coincides with my own experience, that I almost feel at a loss sometimes whether I am writing out Dr. Cook's notions or my own, so far as the action of calomel is concerned. This is my apology for drawing so largely upon Dr. Cook's book, with which I am not entirely done yet.

Dr. Cook, after giving the statement of a case, in which he gave a boy a little over an ounce and a half of calomel in seventeen days, with good effect, says, "The risk of salivation in these extreme cases is *less* than is supposed. I have never known a patient in the circumstances, as above stated, absolutely requiring some energetic mode of procedure, to be *badly* salivated after taking the *largest dose*." Dr. Cook further says, "I have even known salivation cured by purging with calomel alone." After giving the particulars of the case, and stating the condition of the patient, who, he says, was pale; the pupils were dilated; was restless and a little delirious; the stomach rejecting every thing, even water; the mouth sore, and saliva abundant—he states that he gave his patient a drachm of calomel each day, for six successive days; at



the end of which time the patient could sit up and eat, and every appearance of soreness had ceased in the mouth.

One more draft upon Dr. Cook, and I will close with his evidence. "Many," says he, speaking of salivation, "consider a patient safe, as soon as this affection of the mouth appears. This opinion is, however, erroneous. The safety of the patient depends, not on producing ptyalism, but upon daily evacuations of consistent bilious matter. *Without the latter*, in cases of any violence, the patient will die, even in a state of salivation; *having them*, he will get well without it."

I will now give a summary of the testimony, which I have adduced in support of the views which I have expressed in my last letter, respecting some of the peculiar properties of calomel, some of which are not recognized or acknowledged generally by the profession—namely: That, as a catartic, calomel acts directly upon the vessels of the liver, and not, like most other remedies of that class, upon the mucous surfaces of the intestinal canal; that it is slow in its operation, and produces few, but large discharges; that it is little or not at all irritating, and that it is the most certain and effectual medicine known for producing consistent bilious discharges. (I will add, that the sooner these effects are produced, in *all* cases which require its use, the better it will be for the patient, and the less will generally be required; hence the necessity of giving it in *full* doses, or in such quantity as will soonest effect the object.) That in those irritable conditions of the bowels, attended with frequent serous discharges, which are always troublesome and often dangerous, calomel is the best remedy, and will very certainly afford relief, if its use be persisted in until its action is impressed upon the liver; that large quantities are sometimes required to accomplish this, and that while these serous discharges continue, or while the condition lasts, which gives rise to them, there is little or no danger of producing salivation. (The case presented in my last letter is very conclusive upon these points, and I have several others, to the same effect, though none which required so large an amount of calomel.) That in cases of irritability of stomach and obstinate vomiting, calomel in a full dose will generally arrest it promptly, even before it has time to act upon the liver, and when arrested in this way, it is seldom apt to recur. (I have an innumerable quantity of cases demonstrative of this fact.)

With regard to the statement of Dr. Cook, that he had known salivation cured by purging with calomel, I must say that he has taken *my thunder*, as I have a case of the same kind to report, and thought I stood alone, never having heard of any other case of the same kind. As it is a practice, however, which should be resorted to only in extreme cases, I will give it notwithstanding. I concur with Dr. Cook, in opinion, that the risk of salivation in those extreme cases is not as great as is generally supposed; and that the *largest* doses, seldom produce it. This is explained by the fact, that large doses will act soonest and most effectually upon the liver, whereby a repetition of large doses are generally rendered unnecessary, and that in cases requiring a repetition of the doses, such as have been mentioned, attended with an irritable condition of the bowels, and serous discharges, which generally depend upon plethora or congestion of the portal veins. Thus a double barrier is placed in the way of its action; for while the plethoric state of the vessels retards absorption, the serous discharges from the arterial capillaries tend to hurry it away from the absorbents. It may be, too, that the same torpor, or insensibility, which would retard its prompt action upon the liver, would pervade the whole system, and prevent its action upon the other organs; but this is not probable, as we sometimes see salivation produced from the repeated administration of small doses of calomel, while the liver remains insensible to its action, and the disease goes on unchecked, as before. Such are the cases in which Dr. Cook says, he has known "salivation cured by purging with calomel alone." In such, I have seen both the salivation and disease removed by a *full* cathartic dose of calomel. The safety of the patient *does not* depend upon salivation, but upon the prompt action upon, and the *unloading* of the vessels of the liver.

While some physicians hail the appearance of salivation as the harbinger of safety to their patients, there are others who dread its appearance to such a degree that they will not venture to use calomel at all, whether from a regard for the welfare of their patients, or a greater regard for their own reputation, I will not decide. The popular sentiment, however, is unquestionably against it, under any circumstances, and so am I. Salivation is not what we want in the malignant and death-dealing diseases of the South; and if calomel is *properly* used, in these diseases, there is generally little or no risk of exciting it. Now, it is not always becoming

for one to speak *of* himself, but professing to speak *for* myself, I may be allowed to say—not, however, in an arrogant or boastful spirit—that the success which I have had in the use of calomel, (for which, I am not too modest to acknowledge, the professional brethren, acquainted with my practice, have awarded to me a full share of credit,) has been, in a great measure, the result of the *manner* in which I have used it; and the few general rules which I have observed in the use of calomel, have been—after determining the *necessity* of its use, then to use it in such a *manner*, and in such *quantities*, as will *soonest accomplish the purposes* for which it may be used; and when this is done, then to *discontinue* its use. Now these rules, though few, and apparently very simple, to be reduced to successful practice, requires the exercise of *judgment*, *prudence*, and *discretion*; for it cannot be denied, that the evils resulting from the use of calomel have often been from a lack of these, and that it has often been used when it was *not required*; has been used under circumstances, and in such manner, and in such quantities, as to produce its worst, without its good effects, *in cases in which it was required*; and has often been *continued* after its use had *ceased* to be *necessary*. From observing these few rules, (the minute details of which I purpose giving hereafter, such as the circumstances which indicate the *necessity* of its use—the time and manner of its administration, and the quantity necessary in each case; the signs for its discontinuance, &c.,) which I have found little difficulty in reducing to practice, on account of popular prejudice; having always been an open and avowed advocate of the use of calomel, I do not hesitate to declare that, with it, I have been the means of doing more good, and saving more lives, than with any, and I might say, all other remedies.

Quinine, which may also be styled a *life-preserving* remedy, stands next to calomel, in value and importance, each having the highest claim upon the profession *in their respective spheres of action*; for while calomel possesses the power of often *rescuing* or *snatching* a man *from* the jaws of death—quinine has the power of *keeping* him *out* of them. Opium, too, has its claims; and though high in the sphere of its action, which is more extensive than either of the others, it can be regarded only in the light of an auxiliary remedy. These, with the lancet, may be said to constitute the *four cardinal* remedies of the profession, with which, under proper management, the most malignant diseases may be successfully combatted.



Now, these remedies can aid each other in the work of preserving life, but they cannot perform each others' work. Can quinine *unload* the liver and bowels?—can it restore suspended secretion?—can it stop vomiting and purging?—can it eliminate poisons from the system? Calomel can. Can calomel break up the periodicity of disease?—can it prevent or remove depression, congestion and collapse?—can it give tone and energy to the nervous system? Yes, to a certain extent it can do all these things, though not so well as quinine. Can calomel and quinine subdue a burning fever, arrest a raging inflammation, or assuage a throbbing or an aching pain? Only to a limited extent, and in an indirect manner; yet the lancet and opium will do it promptly. Is it not strange!—"passing strange!" that with all these things, full in view, there are physicians in our midst, whose opinions *ought* to be entitled to credit, who have openly denounced some of these remedies, (calomel and the lancet in particular,) as unsuited, or unsuitable, in the treatment of some of our most formidable and dangerous diseases, and have offered us for their substitutes, *phosphorus! aconite! and bryonia!* Nor is it less strange, that large numbers of our southern physicians should have assumed, that the free use of quinine will enable them to dispense with the use of calomel in our dangerous diseases, and malignant epidemics. And, stranger than all, that there should be some old and long tried physicians, who advise that *little* or *nothing* should be done, alledging that one system, and set of remedies, work about as well as another, and all are of no avail.

Now, to show all this matter up in its true light, I will give you an *allegory*: A poor fellow accidentally fell into a river, and in the act of drowning, called to some men on the shore for help. They had at hand a boat, and life-preserver, and a bundle of straws. One of them said to the other, I will throw him my life-preserver, it will hold him up better than the boat; besides, I do not know much about boats, and I am told that they are dangerous things any way: so he threw him the life-preserver. Another one said, that's just what I think about boats; they are dangerous and useless things to my certain knowledge, for I have tried them often; let me throw him some of my straws. The third one said, I know the boat will not do under any circumstances, and I have no confidence in your straws, or your life-preservers either—one is as good as the other; let us watch him until he drifts ashore, and then

we will help him. So the poor fellow drowned. And when the facts came to be known, how they had all refused to send him the boat, when they might just as easy have saved his life, the people all thought that it was very strange, that the men did not send him the boat, and give him a *chance*, at least, for his life. Some said they thought it a very *cruel* act, not to send him the boat; others said they thought that it was a very *foolish* one; but the men themselves did not seem to think or care much about it, and it all soon passed off and was forgotten.

Finding that I shall not be able to make a statement of the cases, which I had purposed doing, illustrative of the more important points concerning the action of calomel, I will reserve them until I come to speak of the diseases to which they respectively belong.

Having generalized to a sufficient extent, in my next letter I will make a summary review of the general principles which I have maintained, and afterwards will make a therapeutic application of them to some of our more formidable diseases. It is said that "drowning men *catch at straws*." For mercy's sake, let us offer them *something* better; and if I can persuade one man only, that *there is not so much danger in a boat*, I shall consider myself well paid for my trouble.

Respectfully yours, &c.

SAML. D. HOLT.

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ARTICLE XV.

*Cases of Lithotomy.* By L. A. DUGAS, M. D., &c.

CASE I. Henry S., the son of a highly respected professional brother of Coweta county, in this State, had experienced the usual effects of stone in the bladder from early infancy until the age of six years, when the bi-lateral operation of lithotomy was performed in June, 1851. This operation was, however, productive of only partial relief, as he continued to suffer, although at first less severely than before it. In a short time his symptoms became as bad as ever; the wound, instead of healing as usual, was at the end of three months reduced to the size of a quill, and finally closed entirely about three months later.

The little patient was brought here and placed under my charge in February, 1853. On endeavoring to sound him, I found that although the integuments cut in the previous operation had healed,

such was not the case with the urethra, for the sound would pass from this canal into a pouch in the perineum, and could be felt just within the thin skin which covered it. This circumstance rendered catheterism somewhat difficult, as it was not easy to carry the sound into the canal beyond after it had entered the pouch. I succeeded, however, in detecting a large calculus, and at once determined to operate.

On the 22d February I performed the bi-lateral section, under the influence of anæsthesia, and seized the calculus, which crumbled into pieces on endeavoring to extract it. The scoop was then used, and about a table-spoonful of chalky-looking fragments removed. The bladder was carefully explored with the finger until every particle was brought away with instruments and repeated injections of tepid water. On the seventh day the wound had entirely closed.

The child returned home, with the injunction to use vegetable acids as freely as possible, so as to prevent a reproduction of the calculus, which was evidently ammoniaco-magnesian. How long these instructions were carried out I am unable to say. In a letter received from his father, I am informed that the child "for twelve months after the second operation enjoyed fine health, and was growing rapidly, without any symptoms of a return of the disease. After the expiration of this time he was attacked again, and suffered as much as he had at any time previous, discharging quantities of pure pus, occasionally mixed with a little blood and small fragments of stone, which very much resembled those you extracted. He continued in this way some two or three months, suffering by paroxysms, when he was suddenly attacked with violent colic, accompanied with vomiting and purging, which terminated fatally in two or three days." He died on the 27th September, 1854.

REMARKS.—This case derives interest not only from the fact that the patient underwent at so early an age two operations of lithotomy, but also from the persistence, or rather recurrence, of the calculous diathesis even after the second operation. I say *recurrence*, because there is no evidence of any reproduction of the disease for upwards of a year after the second operation. From the little relief afforded by the first operation, the non-closure of the wound for many months, and the continually increasing severity of the symptoms, it may be questioned whether some portions



of the calculus had not been left in the bladder. Yet the operation was performed by an experienced surgeon, who could hardly be presumed to have committed such an error. I am informed by the parent that the first stone was of the same character as that I removed, and that it was likewise crushed in the extraction.

CASE II. James F., of Dooly county, about twelve years of age, had suffered with symptoms of stone in the bladder from early childhood, but his general health was unusually good. Finding, upon examination, that the calculus was small, I determined to try to crush it with the lithotrite. Dilating bougies were accordingly used some days, but occasioned so much irritation in the urethra that they had to be discontinued, and I had to wait until this had subsided before making any further attempts. His urethral canal being very small, a correspondingly small lithotrite was passed into the bladder, and the stone seized; but its hardness was such that it could not be crushed by any force that could be applied without danger of breaking the instrument. A few days later another attempt was made, with similar result.

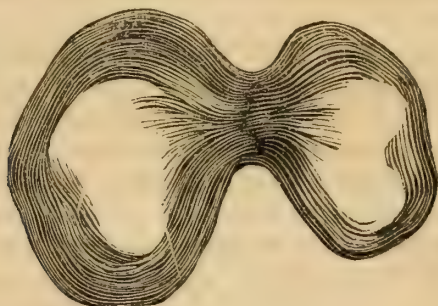
Lithotomy being now the only alternative, the bi-lateral operation of Dupuytren was performed on the 29th July, 1855, under the influence of concentrated chloric ether, and a calculus of oxalate of lime removed. Its shape was a flattened ovoid, seven-eighths of an inch long, three-quarters of an inch wide, and half an inch thick. It weighed seventy grains.

No unpleasant symptoms manifested themselves, and on the 9th August, being well, he returned home.

CASE III. Columbus A., of Columbia county, had experienced symptoms of stone from early childhood, and was very much emaciated and debilitated. Although in his eighteenth year, his physical development had been retarded by excessive suffering to such a degree that he did not appear to be more than ten years of age. For several years his urine was continually dripping, so that there was rarely any accumulation in the bladder. Sometimes he would pass off once in the course of twenty-four hours as much as two or three ounces of urine. It was remarkable that moderate walking, or riding in a carriage, did not aggravate the symptoms.

Having been put under the anæsthetic influence of chloric ether, the bi-lateral operation was performed on the 13th November last,

and an hour-glass shaped calculus was removed, of which the accompanying wood-cut is a faithful delineation. It weighed about an ounce and a half, and was composed of ammonio-magnesian phosphate of lime.



Upon making a longitudinal section of this calculus with a fine saw, a nucleus of darker and more dense material was found occupying the centre of the neck, and projecting about equally into the two enlarged portions of the stone. This nucleus presented more length than breadth, being about three-fourths of an inch long and half an inch wide. The shape and size of this nucleus will serve to account for the position occupied by the calculus, the large extremity being found to be within the bladder, while its lesser end was in the urethra, and its neck consequently grasped by the orifice of the bladder. It would therefore seem that while small, as represented by the nucleus, it attempted to escape from the bladder, but was caught at the origin of the urethra, and remained there until by deposits upon its surface it reached its present dimensions. The deposit being more copious within the bladder, this portion of the stone grew faster than that in the urethra.

The abnormal position and form of the calculus rendered the introduction of instruments quite difficult, and much care was required not to break it in the extraction. On being removed, the pouch in the urethra was found lined with soft detritus, which had to be scooped out. The bladder was then carefully and repeatedly washed out until no vestige of fragment remained. On the fourteenth day after the operation the patient began to pass his urine per urethram, and he went home on the 10th of December.

The wound finally closed a few days after. He has continued to improve ever since, and is now in fine health.

The position of the stone and its consequent immobility will explain the stillicidium urinæ and the non-aggravation of symptoms by walking and riding.

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*Observations on Hæmorrhages arising from Implantation of the Placenta upon the Cervix of the Uterus; with Remarks on the Pathogeny and Therapeutics of this Accident.* By M. LEGROUX, Physician to Hôtel-Dieu of Paris, Agrégé Professor to the Faculty, etc. etc.

Hæmorrhage consequent upon the insertion of the placenta over the cervix of the womb, has, latterly, been the subject of much discussion, both in learned societies and medical periodicals.

The most complete and important document which has appeared among recent publications is Dr. Depaul's report\* to the Academy of Medicine on a case of complicated labor, communicated by Dr. Gérard.

More recently, Professor Dubois has taken up this matter in his clinical course; and his lectures, which first appeared in the *Journal de Médecine et de Chirurgie Pratique*, have been very generally republished.

After such imposing authorities in obstetrical matters have given their opinions, I almost fear to enter on the question, or to give the results of my personal experience. For, if I have observed and appreciated facts aright, the generally admitted doctrine in respect to the pathogeny of placenta prævia must be laid aside. If I am not deceived, some of the precepts of the masters of obstetrical art must be modified or revised, and a new therapeutical element must find a place in their teachings. May the desire and hope of being useful to humanity justify the boldness of my undertaking!

In the first place let me briefly recall the reigning doctrine on the pathogeny of this hæmorrhage.

"It is generally admitted that the flooding becomes more profuse as labor advances, and the separation of the placenta, from which the hæmorrhage arises, becomes more considerable; that whatever increases the uterine contractions necessarily augments the bleeding; that the means of arresting this are precisely those which suspend the contractions, for the hæmorrhage lessens and ceases only in the intervals between the pains," (Gardien, 2nd ed. t. ii. p. 404.)

And farther on, (p. 406,) it is stated that "the flooding produced by the separation of the after-birth, at any other part of the internal surface of the

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\* Bulletin de l'Académie, July 1852.



womb, augments when the true labor pains are suspended, and ceases when the pains are active."

The reason of this difference is that, in the latter case, the womb closes the orifices of the uterine vessels, as it contracts; whereas, in the former, the contractions of the body and fundus dilate the cervix, and separate the placental attachments more and more, the distended vessels remaining open-mouthed.

According to this theory, the hæmorrhage is *placental*. A multitude of objections are at hand, but I pass them by for the present. With the opinion of Gardien, I collate those of Désormeaux and Professor Dubois.

"Blood flows more abundantly during uterine contraction in hæmorrhage from insertion of the placenta over the cervix, while, in other hæmorrhages, the compression of the womb suspends the flooding. The blood in the former case, is forced out of the vessels of the cervix and of the placental parenchyma by the recession of the circumference of the uterine orifice, and by the pressure of the child on the placenta." (Dict. de Méd. art. Métorrhagie, t. xix. p. 660.

This doctrine, attributed to Dupareque, admitted by Désormeaux, M. Depaul, and Professor Dubois, and uncontradicted, so far as I know, is very similar to that of Gardien; only the latter attributes the hæmorrhage to the *gradual separation of the placenta, the vessels of which remain gaping*; whereas the other theory takes account of the pressure of the foetus, and assigns an utero-placental origin to the hæmorrhage. In both theories, however, the uterine contractions are considered the primary cause.

The hæmorrhage is in direct relation to the *activity* of the labor, and the hæmostasis depends on its *suspension*.

The practical deduction is this: *to arrest the hæmorrhage, moderate the uterine contractions*.

But inasmuch as parturition must go on, after all, we are advised, in the face of theory, to hurry the labor by ergot, in order to hasten the delivery of the placenta. But we are necessarily placed between two perils. If we excite uterine contraction, as practical sense would seem to dictate, we incur the hazard of profuse and fatal flooding. If we moderate the pains, according to the indications of theory, the blood does not flow so fast, but the patient almost invariably succumbs to the progressive anæmia.

I hope to substitute for this theory *one which subordinates the hæmostasis to uterine action and reciprocally*, and which will permit uterine action to be augmented without danger.

I shall state, in the first place, the facts on which this theory is based. My first cases\* are designed to determine the source of the hæmorrhage.

\* We have found it necessary to abridge the reports of cases, but have endeavored to omit no important fact. Otherwise, we could not have published M. Legroux's paper in a single number, as it occupies over thirty pages of the Archives, a greater space than we can afford.—*Translator's note*.

CASE I.—A woman æt. 30, had been flowing, at intervals, for a fortnight, when she was brought to the Beaujon hospital in April 1852.

She was near her term. She had lost much blood; the foetal movements had ceased. She was still flowing moderately and though of robust habit, was pale and feeble. The os uteri admitted the end of a finger, and presented no abnormal appearance. (*Rest in horizontal posture, astringent drinks and injections.*)

The hæmorrhage ceased, but returned in a few days; the patient became faint. I asked the advice of Dr. Robert, surgeon to the hospital. By digital and speculum examination, we made sure of a prominence of the posterior lip; the finger, after passing the os, perceived a spongy substance. The woman bore the examination, in both the horizontal and vertical positions, without discomfort.

We decided to give ergot. The medication had not been commenced, however, when, towards the close of the day, the woman, without more flooding, died unexpectedly in a swoon.

*Autopsy.*—Central implantation of the placenta over the os uteri. Placenta soft, brown, decomposed, not foetid, however; placenta easily detached. Fœtus decomposed. No visceral lesion to explain the sudden death.

The decomposition of the placenta, resulting from the death of the foetus, forbids us to locate the hæmorrhage in that organ. If the bleeding was utero-placental at the outset, it was assuredly purely uterine after the child's death.

Notice also a fact, which is constantly observed in cases of placenta prævia, that flooding occurred long before labor, and therefore independently of uterine contraction, to which theory assigns the chief share in its production.

The following is a succinct summary of a case observed in 1844, at the hospital Saint-Antoine, and recorded with great care and detail by my friend Dr. Bernutz, who has kindly communicated it to me.

CASE II.—A woman, æt. 44, was in the eighth month of her thirteenth pregnancy. She menstruated the first four months, but had seen nothing since, until towards the end of the eighth month, when, after bad treatment from her husband, she began to flow, and lost considerable blood at intervals for three days. The flooding ceased after a protracted syncope, and the next day the woman was brought to the hospital.

She was pale, but there was no hæmorrhage. The os was dilated to the size of a quarter of a dollar, and was filled with a substance which felt like *cup moss*.

In the night, copious hæmorrhage, sighing respiration, epigastric pain, feeble, frequent pulse, *no uterine contraction*, same state of os. (*Cold vaginal injections.*) The hæmorrhage ceased. The patient took a little wine, and felt better. The tampon was employd, but the patient complained of it, and of a great pain at the epigastrium; the stomach retained two scruples of ergot, which had been given in three doses. Soon after, the patient became delirious, the pulse failed, and a state of syncope ensued, which resisted every mode of stimulation.

*Autopsy.*—Heart contains black and fibrinous coagula; in the great vessels a quantity of blood analogous to what is usually found in examinations *post-mortem*. The uterus contains a foetus at term in a state of decomposition. The placenta, implanted on the anterior surface of the cervix, completely closes the orifice, and rises a few lines beyond the posterior border. The os is dilated to nearly the size of an half dollar piece, and is filled by the tampon, which is hardly stained. No open vascular orifices.

The anatomical conditions of the placenta are not mentioned in this case. Notwithstanding this omission, we may assume that the utero-placental circulation was more or less completely intercepted after the death of the foetus; for, according to Professor Moreau, when the foetal circulation ceases, the blood coagulates in the uterine vessels, and many of the latter are obliterated. Only enough blood goes to the womb as may suffice for its nutrition; the *stimulus* which invited more is gone, and hence dilatation may occur without much hæmorrhage, albeit the vessels which unite the placental borders are torn. This is Dr. Cazeaux's rational explanation of the dilatation of the cervix without hæmorrhage.

Death, in the two cases I have cited, was not the direct and immediate, but the secondary, effect of the hæmorrhage. In the second case, indeed, the fatal termination was brought about by a series of accidents; but in the first it occurred unexpectedly, and without extreme exhaustion.

I think it useful to dwell on the dangers of the anæmic state induced by repeated floodings, dangers which continually menace the patient, even after a protracted cessation of the bleeding. I shall insist, also, on the danger of some of the obstetrical manœuvres which may be requisite under these circumstances.

CASE III.—A year ago, a woman was brought, at the hour of my visit, to my lying-in ward at Hotel-Dieu, who had been several days in labor, and was exsanguined by repeated hæmorrhages.

A spongy substance, that was evidently the placenta, filled the orifice of the womb, which was detailed more than two inches, (6 *centim.*) The case was urgent. The extreme debility of the patient indicated that she could not withstand another hæmorrhage. I attempted to deliver. Contrary to my anticipations, the cervix was so unyielding that I could not dilate it by introducing my fingers. I had scarcely commenced my manœuvre when the woman swooned and seemed about to expire. I desisted, and ordered stimulants, broths, sinapisms, and left directions that the tampon should be used on the slightest recurrence of hæmorrhage.

Hæmorrhage did not recur, but the patient sank gradually, and died in a few hours.

*Autopsy.*—Placenta over cervix, as had been recognized during life. No clot between the uterine and placental walls to explain the hæmorrhage. It was impossible to discover, at points where the placenta was separated, the orifices of any vessels.

What else could have been done for this poor woman, in her state of extreme exhaustion? Artificial delivery would obviously



have caused instant death, since even the introduction of the hand into the vagina induced syncope. Should the membranes and placenta have been perforated? There were no uterine contractions, and the sudden removal of pressure from the abdominal contents, after the escape of the waters would have aggravated the syncope. I have since regretted that I did not use the tampon, which might have induced uterine contraction, and stimulated the vital powers.

In this case, also, death took place many hours after hæmorrhage had ceased, and was a secondary result.

I observe the same thing, lately, in the case of a lady of Courbevoie, whom I attended with two eminent colleagues. She was exhausted by repeated hæmorrhages occurring in a lingering labor. When I saw her the flooding had stopped. The os was largely dilated; a large, spongy mass was behind it; the tissues were all relaxed. Extraction of the placenta, version and extraction of the child seemed easy. We decided that this operation was indicated. I practiced it. The whole manœuvre required less than a minute. The lady complained, at the moment of extraction, of faintness and a sensation of anguish. No blood followed. Notwithstanding, and despite the devoted care and attention she received, this patient succumbed in a few hours, without reacting.

In the last six months, two cases of artificial delivery in placenta prævia have been in my lying-in ward, under the care of Dr. Danyau,\* specially charged with cases of dystocia. Both of them succumbed two or three days after the operation.

The simple extraction of the placenta, after the child is born, produces the sensation of anguish I have alluded to, in a woman exhausted from hæmorrhage. One morning during my visit, I found a young woman blanched by hæmorrhage, which doubtless was due to inertia of the womb after expulsion of the child. The extraction of the after-birth seemed urgently requisite. I relied on the contractions which the introduction of the hand would excite; but this simple operation, as rapid as it was easy, produced, at the moment the placenta came away, a dying sensation, which was followed, in a few instants, by actual death. Death was certainly impending, and inevitable perhaps, in the exsanguined state in which I found this woman; but I asked myself if I had not accelerated the fatal event, by performing an operation.

From these facts, the number of which I could readily increase, two conclusions may be drawn: 1. That anæmia due to repeated hæmorrhages, an anæmia which I would term *acute*, in contradistinction to the chronic anæmia induced by unfavorable hygienic conditions, which may be extreme without endangering life—that

\* Dr. A. C. Danyau, son of an accoucheur formerly in great vogue in Paris, and son in law of old Roux, is surgeon to the Maternité. He is one of the eight members of the section of accouchments at the academy, and is great authority at the Surgical Society on matters pertaining to obstetrics. He has been in practice twenty-six years.

acute anæmia, I say, exposes patients to sudden and unexpected death, and demands all the solicitude of the practitioner. 2. That the slightest obstetrical manœuvre, during the debility of acute anæmia, may superinduce a fatal perturbation.

After this digression, which I have thought might not be devoid of practical interest, I return to the facts which illustrate my views of hæmorrhage in placenta prævia.

CASE IV.—Mrs. Lemasson, æt. 28, rue St. Antoine, reached the eighth month of her eighth pregnancy in May 1847, at which date she had an hæmorrhage which seemed to threaten a premature labor.

Moderate venesection, indicated by a somewhat plethoric habit, and cold applications to the abdomen and thighs checked the bleeding. It returned, however, on three occasions, before term, and was thrice controlled with the same facility; but the third time, the bleeding was not restrained entirely, and it became abundant after three or four days, when labor began.

The presumption of placenta prævia was confirmed as soon as dilatation was sufficient to admit the finger, which encountered a spongy mass, so thick as to conceal the prominences of the fœtus. The dilatation reached about two inches and then ceased, notwithstanding the intensity and frequency of the pains.

On exploring the orifice, carrying the finger as high as possible, I passed, on the left between the internal surface of the cervix and the placenta, and ascertained the following facts:

During the uterine diastole, the finger passed readily between the separated parts; but then the blood streamed by it into the vagina.

During the systole, the finger was driven out by the tense membranes, which were pressed firmly against the uterine walls; *the blood then ceased to flow, but that which had been poured into the vagina during the diastole was expelled by the downward pressure of the womb.*

Having repeatedly satisfied myself of the correctness of these facts, I considered it evident that the issue of blood from the vessels, the *hæmorrhagic fact*, was diastolic, though the appearance of the blood externally, the *apparent hæmorrhage*, was systolic indeed, and coincided with the suspension of the real hæmorrhage.

The hæmostasis was manifestly the consequence of the uterine contraction, of the firm application of the membranes on the inner surface of the cervix.

In order to arrest the hæmorrhage, it was necessary to maintain this state of things during the repose of the womb; to cause the combined mass of the waters and the fœtus to press on the cervix in the intervals of the pains. The vertical posture fulfilled this indication.

I boldly substituted it for the horizontal position hitherto adopted. The patient, too feeble to stand alone, was held by strong persons on either side, while I sat in front, supporting her feet and knees by mine, and sustaining her with one hand, while I manœvered with the other. As soon as she was placed upright, there came a torrent of liquid blood and coagula well calculated to frighten me and cause me to repent of my experiment. But my fears were speedily dissipated; the first gush over, *the hæmorrhage ceased entirely!*

I satisfied myself by the touch that, in the intervals between the pains,

the womb remained on the floor of the pelvis, and that the weight of the waters and foetus maintained the separated vascular surfaces in apposition.

The uterine contractions became at once stronger and more frequent. But the os did not dilate. What was the obstacle to dilatation? Undoubtedly, the peripheric adhesions of the placenta, detached on a small part of the left side only.

I attempted, passing my finger up on the left, to reach the membranes, but unsuccessfully. I presently detected, however, a fissure between the placental lobules which I separated, tearing with the finger nail the parts that offered resistance. I finally reached the membranes, and ruptured them during a contraction. A large rent was immediately torn in the placenta as the waters escaped. The placenta was thrust to the right by the head, which engaged at once, and after delivery was accomplished without any accident. *The child was living and lusty.*

In a portion of its circumference, the placenta was torn for about two and a half inches. Near this rent was a smooth white surface, the cicatrix, probably, of an antecedent laceration.

The woman had a good getting up.

CASE V.—A few months after this confinement, Mrs. Lemasson became pregnant again. The abdomen increased rapidly in volume. By the eighth month it was enormous.

During this month, she suffered from several hæmorrhages, each of which lasted several days, and was treated by rest, refrigerants, astringents and injections. Before her confinement, the bleeding became continuous, and produced a state of anæmia. The pains were feeble; they were not aroused by ergot; the os did not dilate.

The feebleness was such that I could not resort to the vertical posture. I plugged the vagina with bits of lint saturated with a solution of alun. When the tampon was removed, it was evident that it had suppressed the hæmorrhage completely.

The presence of the tampon excited contractions. In three hours, I cleared out the vagina, and found notable dilatation of the orifice, which was occupied by a spongy mass. Following the periphery of the orifice, I found, on one side, a fluctuating membranous protrusion, which I ruptured. The head engaged and rapidly enlarged the opening. In a very few minutes four children were born. They had been dead for some days. The after-birth was delivered without difficulty.

The subsequent history is less pleasing. The patient narrowly escaped death from metro-peritonitis. She had double *phlegmasia dolens*, followed by incomplete ankylosis of the knees, which was not ultimately relieved, until she had passed two seasons at the Bourbonne springs.

The menses have not returned since; but at the supposed monthly periods, the patient suffers from hypogastric pains and hysteriform symptoms requiring anti-spasmodics, and occasionally, leeches to the anus. The general health is blooming, however, and these periodical indispositions are less severe at each return.

This complete observation furnishes a demonstration of the propositions I have advanced, as will appear, I hope, from the following considerations:

*Source of the hæmorrhage.*—When the child is dead, and the



placenta decomposed, it is obvious that the bleeding is purely uterine. This was the case in the first patient whose history has been detailed.

Admitting that after the death of the child, the placenta remains grafted to the walls of the womb, from which it receives materials for its nutrition through special vessels, it is evident that the vascular connections between these organs must be too restricted, the utero-fœtal circulation having stopped, to produce a notable hæmorrhage, such as caused death in case 2.

In one case as in the other, the bleeding was exclusively, or almost exclusively, uterine.

Is it so when the circulation between the mother and child is intact?

*A priori* it might be argued that, nothing being changed in the progress of the accident, the blood comes from the same source. This rational deduction receives a practical confirmation from the case of Mrs. Lemasson. In her case, the bleeding was arrested by maintaining the placental and uterine surfaces in contact, while a portion of the placenta was exposed over an orifice two inches in diameter. If this organ had been the source of the hæmorrhage, would it not have bled freely, while thus exposed, during the active pains excited by the vertical posture?

Therefore, in all cases, the hæmorrhage is almost exclusively uterine.

The death of the child, which precedes delivery in the majority of cases, (in seven out of eight that have been under my care,) would allow us to suppose that the hæmorrhage, at the onset, was placental and fœtal. But there was no placental hæmorrhage in Mrs. Lemasson's case, and her child was living and not anæmic by any means. The death of the fœtus is due to the interruption of the utero-placental communications.

It may be objected that Dr. Simpson's plan of extracting the placenta at once arrests the hæmorrhage: *Sublata causa, tollitur effectus*.

If this objection was valid, the decomposition of the placenta should have the same effect, which it has not. Why this difference? In the latter case, the placenta, although deprived of vitality, still retains its mechanical connections with the uterine walls. As these connections are broken up by the retraction of the walls of the womb, vascular orifices are exposed. Hence those intermittent hæmorrhages, which occur during labor, although the child has ceased to live. In Dr. Simpson's operation, the portion of the uterine surface corresponding to the placenta is exposed at once; uterine contraction is excited by operative manœuvres, and the vascular orifices are closed. Hence the cessation of the hæmorrhage.

It is unquestionable that this operation would be injurious in cases of inertia of the womb.

The practical deduction from this theory is: *hasten, expedite the labor.*

The suspension of hæmorrhage is commonly attributed to the formation of an obstructing coagulum. I have never been able to find this coagulum in any of my autopsies. If the hæmostasis was due to such a salutary clot, the therapeutical deduction would be: let the clot alone, retard the labor, a most pernicious result.

In the exposure of the uterine sinuses by the growth of the womb during pregnancy, and by the dilatation of the os during labor, in this mechanism, we find an explanation of the phases of apparition, suspension, and recurrence of hæmorrhages from placenta prævia.

*Nature of the hæmorrhage.*—Dr. W. Mackenzie's experiments on bitches near the full term of gestation, equally tend to prove that in partial separation of the placenta, bleeding occurs from the denuded uterus, and not from the separated placenta. From these same experiments, and from injections into the uterine vessels, through the hypogastric arteries, of defibrinated blood, this English author concludes that inter-utero-placental hæmorrhage is *arterial*. With Dr. Jacquemier\* I am unwilling to admit this conclusion, when I consider the prodigious developement of the uterine venous apparatus during gestation, and the free communication between all parts of it. This question, however, has more theoretical than practical importance. The capital point is to determine what organ furnishes the blood.

*Relation of the hæmorrhages to uterine contractions.*—I repeat my remark that hæmorrhage in placenta prævia occurs long before term oftentimes, and is consequently independent of uterine contractions.

It has been asserted that the hæmorrhage, in placenta prævia, takes place at each pain, and is arrested in the interval, and that the reverse obtains when the placenta is separated from its attachment to the fundus or body.

In the first case, the observation is correct, but the interpretation is erroneous. I have shown that the placenta is, at the most, only a very secondary source of hæmorrhage. Common sense suggests the improbability of much effusion of blood between the surfaces of the ovum and uterus, when these surfaces are strongly pressed together; and what common sense indicates, experience corroborates. It is, indeed, a matter of ordinary observation that, in the horizontal posture, the flooding ceases in the interval, and returns with the pains; but the interpretation of this fact is that the *real hæmorrhage* occurs in the interval, and that the *apparent hæmorrhage* is only the elimination of blood already effused.

In the second case, observation has certainly been defective, but the conclusion is correct. The hæmorrhage does occur during the repose of the womb, but it is impossible to believe that the flooding

is manifested externally at this period; it is only when the womb contracts that the blood that has filled the vagina during the diastole is expelled.

It is incorrect, therefore, to institute any distinction between the different insertions of the placenta, in respect to the time at which the hæmorrhage takes place.

*Vertical position in labor.*—In the horizontal position, in which the parturient woman is commonly placed, the uterine contractions force the womb towards the vulva and the foetal extremity towards the cervix. When the pain is over, the womb reascends in the pelvis, and the child falls back in the uterine cavity. The weight of the ovum is supported by the posterior wall of the uterus; a part of the force of each contraction is expended in raising the foetal mass, and depressing the womb to the point at which the preceding pain left it; this force is lost as far as expulsion is concerned.

In ordinary labor the womb is equal to its double task; but when the pains languish, the force of the contractions is barely sufficient to raise the foetal mass and imperfectly depress the womb. The labor becomes stationary, and may remain so for hours or days, unless art intervenes.

Ergot may render good service in such cases, or it may be insufficient, and the forceps may be resorted to. Now, under these circumstances, the vertical posture alone, or aided by a dose of ergot, will almost invariably induce sufficiently active labor to bring about a natural delivery.

In this position the foetal mass presses constantly on the cervix, and is a permanent cause of dilatation. However feeble the contractions may be, they are exclusively employed in expulsion, for the womb ascends but little in the intervals. Moreover, this position almost always excites more frequent and energetic pains.

By this means, the use of the forceps may be avoided\* in a great majority of cases, a desirable result, inasmuch as many persons who practice obstetrics are not familiar with the application of these instruments.

I have already treated of the hæmostatic effects of this position. It assuredly does not always succeed, however, and may often be prohibited by the exhaustion of the patient. What resource have we then?

*The Tampon.*—Methodical plugging of the vagina, advocated in 1776, by Leroux of Dijon, is now generally admitted to be an invaluable remedy.†

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\* I was present, a short time since, when a distinguished obstetrician delivered a robust lady by means of the forceps. She had been in labor three days in the horizontal posture. While the operator was preparing the bed, the patient experienced a desire to go to stool, and was placed for a moment on a chair *ad hoc*; such violent pains came on, that if the operation had been delayed for a few minutes, the child would inevitably have been precipitated into the vessel.—*Author's note.*

† Dr. Legroux introduces here a long extract from a lecture of Prof. Dubois on the tampon, which we omit, as we intend to publish that lecture entire.—*Translator.*



I usually introduced the speculum, and filled the vagina with little balls of linen or charpie by means of a long pair of dressing forceps, and when the tamponnement is complete, I apply a 'T' bandage. Many accoucheurs employ the simple pessary of vulcanized india-rubber, invented by Gariel, and recommended particularly by Dr. Chailly. This is inflated after its introduction; the facility with which it is applied permits frequent examinations during the labor, without discomfort to the patient.

*Perforation of the membranes.*—To evacuate the waters, and allow the uterus to contract and close the vascular orifices laid bare by the separation of the placenta, is a practice advised by the majority of authorities, in all cases of profuse flooding towards the end of gestation.\* Nearly all, however, require that the commencement of labour should be clearly indicated by unmistakable pains.

The author of the excellent treatise from which I learn these facts, considers rupture of the membranes preferable to the tampon. Professor Dubois is so convinced of the utility of rupturing the membranes, that he lays it down as a maxim that this manœuvre should be employed in preference to forced delivery by the podalic version; but he makes it necessary that there should be *strong and frequent pains, a certain degree of dilatation and dilatability of the cervix, and a favorable presentation.* This is something more than a "commencement of labor," certainly. It reduces us to the ordinary indications for the operation almost.

Dr. Cazeaux (*loc. cit.*) observes that, after hæmorrhage, the pains are generally feeble, and that labor may advance considerably without any noticeable pains; that the pains may be suspended after having been strong and frequent, although the cervix is dilated and soft. In these two cases, the condition of the cervix will determine the accoucheur's conduct. If this is favorable, the best way to excite or renew the contractions will be to rupture the membranes.

But, notwithstanding the authority of Dr. Cazeaux, I cannot believe it prudent to perforate "when the end of the finger can be introduced, and feels the membranes growing tense at intervals." I am more struck by the dangers than by the advantages of perforation at this stage. It is not certain that this operation will arrest hæmorrhage. If delivery is not rapidly accomplished, the contractions will separate other parts of the placenta, and the hæmorrhage will return. A premature evacuation of the waters retards the labor, and far from being favorable to the child, subjects it to the dangers of uterine compression. When the tampon affords this security, why not wait until the os is sufficiently dilated and soft? Moreover, if hæmorrhage returns after premature evacuation of the waters, we cannot have recourse to the tampon with the same confidence; the blood may accumulate in the uterus.

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\* Cazeaux, *Traité des Accouchements*, p. 775. Paris, 1850.

When the placenta is partially implanted on the cervix, a period always arrives when a portion of the membranes protrudes at the os. It is at this point, obviously, that they should be ruptured at the opportune moment. But when the placenta is centrally implanted, should it be directly perforated? Dr. Gendrin adopted this procedure in two cases. He traversed the centre of the placenta with a female catheter; the waters escaped, and the hæmorrhage ceased. Notwithstanding his success, I should not dare to imitate him. If such a perforation is converted into a laceration, and the foetal head passes through it, the placenta may be caught upon the shoulders, and constitute a grave obstacle to delivery. I deem it safer to wait for dilatation, and to rupture as near the edge of the placenta as possible. The escape of waters will make a rent, through which the foetal extremity will pass, pushing the placenta to one side.

The proposal to rupture the membranes early is attributed to Prezios. But it is to be observed that this accoucheur, by dilating the os with his fingers, in the first place, excited contractions, and that active pains being induced, the membranes could be ruptured with less hazard.

It is admitted that, when the waters are evacuated, the contraction of the womb brings the foetus in contact with the vascular orifices, whence a salutary compression. Now it is not certain that contraction will ensue; neither is it certain that some prominence of the foetal ellipse will be pressed against the part at which the placenta is separated. Do we not deprive ourselves of the most efficacious compressor, of an upper tampon or bladder pessary, by evacuating the waters prematurely? Before disgorging the ovum, is it not rational to wait until the foetus, closely compressed on all sides, will suffice for a tampon?

To sum up what I have said, the conduct of the accoucheur in the floodings towards the end of gestation, due to separation of the placenta, is as follows:

1. To use the tampon, in the form, if possible, of the bladder pessary, which allows the condition of the parts to be examined, without discommoding the patient.

2. To place the patient in a vertical position, having her held if necessary. This position completes the tamponnement. It suffices alone, if the labor is active.

3. Induce and promote pains by ergot, if requisite.

4. Perforate the membranes when the pains are strong and regular, when the cervix is soft and dilated, when the presentation is good.

5. If the tampon and vertical posture fail, the membranes must be ruptured prematurely, which will temporarily restrain the hæmorrhage.

6. Lastly, if the hæmorrhage still persists, and menaces life, the placenta must be extracted.

*Extraction of the placenta.*—Complete separation and extraction of the placenta, advised by Dr. Simpson of Edinburgh, will arrest the hæmorrhage immediately, at least in the majority of cases. This operation is indicated when the means I have described are unavailing. It is an extreme resource. It is inadmissible unless the child is dead or not viable, and delivery by version or the forceps is impossible. (Dubois.)

CASE.—A woman, at term, was seized with an hæmorrhage, which was attributed to insertion of the placenta on the inferior segment of the uterus. Unsuccessful efforts were made to perforate the placenta; but, even after tearing away a portion of the placental parenchyma, the operator failed to reach the amniotic cavity. The tampon did not arrest the bleeding.

The woman was carried to the hospital *des Cliniques*. The membranes were ruptured, and ergot was administered. The uterus contracted incompletely; the hæmorrhage moderated, but was still alarming.

Professor Dubois presently arrived, and found the vagina filled with blood. The os was dilated to the size of a silver dollar; the placenta was implanted over it centrally. The pulsations of the foetal heart could not be perceived.

As the want of dilatation forbade an attempt to deliver by version or the forceps, M. Dubois observed that it was legitimate to separate and extract the placenta. He introduced his hand, secured an edge of the placenta, separated, twisted, and extracted it. The hæmorrhage ceased. In an half hour, active pains came on, and the child was delivered in five hours.\*

This case proves that I was correct in supposing the rupture of the membranes was not a certain hæmostatic. Inertia of the womb might allow the hæmorrhage to continue after the placenta was extracted, also. There cannot be complete security, therefore, after that operation.

*Artificial and forced delivery.*—If the means that have been described did not arrest hæmorrhage, rather than stand by helplessly while life was ebbing, it would be right to resort to an hazardous operation, to deliver forcibly, making an incision in the cervix if necessary. Such an operation will be very rarely indicated.

But when there is good dilatation, and a soft and yielding cervix, ought we to deliver immediately by version or the forceps?

I may be wrong; but in such a case, I should wish to wait for natural delivery, if I was master of the hæmorrhage. I should be still more inclined to this course if the waters were intact, and I could count on the amniotic bladder as an upper tampon to aid my vaginal or lower tampon. If the waters have escaped and the woman is exhausted, artificial delivery is the only resource. But, I repeat, I have a dread of the perturbation produced by obstetrical manœuvres at such a moment. If the woman is so feeble that artificial delivery is deemed too hazardous, she should be placed with her head low, her limbs raised by pillows; a bandage should be placed around the abdomen; hot wine, broth, and other resto-



ratives should be administered; sinapisms should be placed on various portions of the skin. Perhaps these means will revive the powers, and the labor may be accomplished.

I will not dwell long on these great obstetrical difficulties. My experience does not warrant me in saying more.

Let me in conclusion, adduce a single etiological remark.

All the cases of placenta prævia of which I have learned the history, occurred in women who had borne several children, in whom the uterine cavity was necessarily larger than in primiparæ, a condition favorable to the descent of the fecundated ovum into the lower part of that cavity. Prophylaxis is at fault in such circumstances, unless it might be prudent for a woman predisposed by an antecedent placenta prævia, to pass the early part of a subsequent pregnancy in an horizontal posture.—[*Archives Générales de Méd. Virginia Medical Journal*.

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### Cataleptic Hysteria.

Dr. Ringland communicated to the College of Physicians, in Ireland, April 4th, 1855, the following very curious case of cataleptic hysteria:—

Mrs. —, an English lady, of literary tastes and sedentary habits, about thirty years of age, and married eight years, had been very delicate from her earliest infancy. During the six years antecedent, and the year immediately subsequent to her marriage, she suffered from most intense headache. Two years prior to her marriage she was under treatment for spinal irritation, as she was informed by her then medical attendant. About this period, too, she voided several portions of tapeworm, and had frequently, both before and after her marriage, passed large quantities of ascarides. She was at all times subject to palpitation of the heart, and had on one or two occasions a slight hysterical fit. She suffers intense pain on touching the last dorsal vertebra, which for some years has projected to about the size of a nut. A sound as loud as the snapping of the fingers is frequently heard proceeding from this locality whenever she is much fatigued, or has been standing for a considerable time; and this sound Dr. Ringland has more than once heard. She also experiences, since her first confinement, great pain on the least pressure being made against the coccyx, which has been slightly dislocated downwards and backwards, and has become ankylosed in that direction.

On the second night after she was married, whilst engaged at prayers, she was suddenly, and without the least premonitory indication, seized with the first of the series of fits about to be described; and this was shortly followed by a second, of a like character. An interval of six months then elapsed without their recurrence; when, however, being much about that length of time pregnant, she was again attacked, and, as on the former occasion,

without any premonitory symptom, and whilst in a state of complete mental quiescence, having been previously engaged in calm, unexciting conversation with her husband. The headache from which she had previously suffered was greatly aggravated from this period until after her confinement, and she has described it as though a tight iron cap was violently pressed on the upper half of her head, to which the headache was strictly limited. The fits now returned with but very short intervals, and it was with considerable difficulty her medical attendant prevented a premature confinement.

Some little time after the fits became completely established, she observed that, if she was engaged in conversation immediately antecedent to the access of one, she could not command the words she uttered, although fully aware of what she ought to say, and thus she frequently appeared to give expression to the most absurd ideas, and to opinions which were quite opposed to what she had intended to convey. Often, too, having spoken a portion of a sentence, she terminated it on a subject quite different from that upon which she had commenced her observations, or came to an abrupt close, finding herself totally deprived of further utterance.

Up to, and during her confinement, she had frequent attacks, sometimes so many as thirty in the twenty-four hours, and seldom less than fifteen or twenty. After her confinement, which was easy and natural, they were reduced to two or three in the day, and on very rare occasions one whole day has elapsed without their recurrence. Within the last eighteen months her health in this respect has considerably improved, as, repeatedly, days, frequently weeks, and sometimes even a month, has elapsed without a fit.

The origin of this affection she attributes to excessive fright, produced by witnessing very violent paroxysms of hysteria, almost amounting to insanity, in a female relative, with whom she was on a visit shortly before her marriage.

Fatigue, excitement—whether pleasurable or the reverse—or even music—if loud or prolonged—noise—the slightest start—the least pressure against the painful part of the spine, or against the coccyx, instantly induces a fit; they frequently, however, come on without any apparent exciting cause.

The duration of each fit is very variable; sometimes it lasts only three or four minutes, and sometimes it is prolonged to an hour and a half. Dr. Ringland has witnessed several which lasted from twenty minutes to half an hour each.

She has never had less than two fits when attacked, the second being of much shorter duration than the first, and invariably succeeding it after but a short interval.

She appears to have been obnoxious to the attacks at all times and seasons, in all postures, and under every circumstance. She has been liable to them in summer as well as in winter; has been

attacked whilst in bed or at her meals; whilst engaged in reading, writing, or in conversation; whilst standing, walking, or sitting; whilst alone or in the midst of strangers;—frequently with a word half uttered, or a piece of food partially masticated; and more than once has her life been placed in jeopardy by the fit occurring when she was near a fire, or whilst she was engaged in the act of deglutition. The presence or absence of menstruation has no apparent connection with the attacks, nor has that secretion ever been in the least affected by them; neither does the existence of pregnancy or lactation seem in any respect to influence this strange affection, excepting that the fits have been much more frequent from the moment of impregnation up to the period of quickening, than at any other time.

Instantly, on the access of a fit, she falls backwards and forwards, according to the direction in which her head has been at the moment. Should she, however, have her baby in her arms at the time, she holds it firmly clutched in her hands, which cannot, without considerable violence, be opened; although, when the fit ensues at any other time, her hands, though closed, can be easily opened.

The particulars of this lady's case Dr. Ringland learned from herself some months prior to her then approaching confinement—her fourth—and which took place early in December, 1854. Immediately after the birth of the child, which was mature and healthy, she had one of her customary fits, which was followed by a second, immediately after the expulsion of the placenta. The following is a brief description of the first fit witnessed by Dr. Ringland.

Without any previous indication whatever, she suddenly seemed to faint, and lay in a state of *apparently* total unconsciousness. She, however, was quite aware of every circumstance that occurred around her, and could afterwards detail the conversation which had taken place in the room. Her limbs remained in whatever position they were in at the time of the attack, or in any other to which they were subsequently changed. There was no alteration in the color of her lips, in her complexion, or in the appearance of her skin, which remained of the natural temperature. Her eyelids were closed, but when raised, continued open until closed again. The pupils contracted well on exposure to light. Her pulse was about 100, but very feeble. There were no apparent heavings of the chest nor movements of the nostrils. Repeatedly during the existence of the fit, but more violently towards its close, there were convulsive twitchings of the muscles of the face, spasmodic clenching of the fingers, and forcible supination of the hands on the forearm. There were no convulsive movements of the lower extremities, although such occasionally occurred, as she informed Dr. Ringland, and were always present during the first few months of the existence of the fits.



No restoratives were applied during the fit, as she had previously intimated to Dr. Ringland that the employment of the most simple of these had always produced violent and prolonged hysterical paroxysms, which never presented themselves when interference was not had recourse to.

After the lapse of about five minutes she gave a deep sigh, then opened her eyes, looked about her, and feebly held out her hands. On this signal, which is well understood by her attendants, she was without delay raised into a sitting posture, and after a brief interval of quiet she was perfectly restored.

Had not her attendants, as she informed Dr. Ringland, at once placed her in the erect position, she would have relapsed again and again into the fit. She, too, is so conscious of this necessity, that instantly on the subsidence of the fit she holds out her hands, as described, thereby indicating her desire for the requisite assistance. Should she at this time be handled roughly, or should the tender part of the spine or the coccyx be touched, she at once relapses into the fit.

She is not able until after the relapse of considerable time, and not even then without the greatest effort, to utter a single syllable, the peculiar condition excited throughout the system appearing in her case to attach itself more firmly to the tongue than elsewhere.

After the subsidence of the attack she is greatly distressed with tremors of the whole body, which last sometimes for only a few minutes, but at times continue for several hours.

Dr. Ringland, before concluding, made a brief summary of this singular case, directing attention to its leading characteristics and points of interest; especially to the previous existence of spinal irritation; the occurrence of the attacks in summer as well as in winter; the existence of consciousness during the fits; the erect position being necessary at the close of the fit, and neglect in this respect causing relapse; the loss of speech being prolonged after the subsidence of the other symptoms; and finally, to the fact that restoratives induced hysteria.—[*Dublin Quarterly Jour. Med. Sci.*

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#### *Cases of Pharyngeal Abscess.*

Dr. Wm. Lochhead, of Glasgow, records (*Glasgow Medical Journal*, October, 1855) the two following interesting cases of pharyngeal abscess:—

“CASE I. On 1st April, 1855, I was called to an infant, aged six months, that was very much reduced by the discharge from abscesses, which had formed on various parts of the body, but which had now dried up. It was breathing with some difficulty, every inspiration being accompanied with a sound, as if the nasal passages were obstructed. On examining the nose, nothing could be found sufficient to account for the symptoms; neither was there

any enlargement of the tonsils, nor indeed any morbid appearances, so far as I could observe, except that the mucous membrane was redder than natural, this being the only evidence of the presence of inflammation. The dyspnoea appeared to me to depend on some obstruction connected with the posterior nares, and not upon any inflammatory action going on in the organs of respiration, as the sounds of the chest were quite normal. I ordered the child to be placed in an easy posture, allowing it perfect liberty to move its head in whatever direction it seemed to be most at ease, while it was made to inhale the vapor from warm water, and had a blister applied to the nape of the neck. Next day, and indeed for several days afterwards, the breathing got very little worse. But on the 8th of April the symptoms were much aggravated, the breathing being accomplished with difficulty, and attended with a loud noise, the head thrown back, the face pale and anxious, and the mouth wide open, with great restlessness. On examining the throat minutely, there was observed the rounded form of an abscess, deep in the pharynx, situated in front of the fourth cervical vertebra. Its real position, however, could not be accurately ascertained, as retching was induced whenever the tongue was touched. I was satisfied that it was an abscess, from its having so suddenly assumed its present prominent position, nothing having been observed the day previously. Deeming the case now of sufficient interest and danger to justify a consultation, Dr. Lawrie was called in, who at once confirmed my views, both as regarded the nature of the case, and the immediate treatment to be adopted. The swelling being very deeply situated, and not easily brought into view, was with some difficulty reached; but by pressing down the tongue with the index finger of the left hand, a bistoury, guarded to within a short distance of its point, was thrust into the swelling, when there issued a copious discharge of pus, with instant relief to the little sufferer.

"On the 9th the dyspnoea had again partially returned, from the sac of the abscess having again filled. I did not, however, interfere until the symptoms were more urgent, thinking that the matter would soon find its way through the old opening. Early on the 10th I was summoned in great haste, as the child was said to be dying. I found all the appearances of impending suffocation more marked than ever they had been. So hastily, having guarded my abscess lancet, I proceeded to make a free incision into the tumour, as far down as I could reach, when a large quantity of fetid pus was discharged, and complete and permanent relief followed. For a few days I emptied the sac occasionally, by pressing upon it with the finger; but from that time up to the 3d May the child has done well, and is at present in vigorous health.

"I ought, perhaps, to state that the patient had been put upon syrup of the iodide of iron, quinine, port wine, and every other means that could be thought of to improve the general health; but

these means having nothing to do with the abscess under consideration, need not be enlarged upon.

"CASE II. On the 2d of August, I was requested by my friend Mr. R. Renfrew to see a child, aged eleven months, with an inflamed submaxillary gland, which had been gradually subsiding under appropriate remedial measures. But as the dyspnœa seemed to increase, although the swelling was not so great, he thought there might be some inflammatory action going on in the larynx. On accurate examination, however, it was found to be a case of abscess in the pharynx. As the danger was not imminent, we agreed to defer interference until the swelling became more pointed. On the succeeding morning there was still no urgent necessity for interference, and as the breathing was not worse, we thought it better still to wait. In the evening the symptoms became more alarming, the dyspnœa very great, and the abscess more enlarged and prominent. As I found great difficulty in reaching the abscess, guided, as in the former case, by the index finger, I pressed down the tongue by means of a spoon, bent to nearly a right angle, which enabled me to see the tumour, and to open it exactly in the mesial line, and at its most dependent part, which had the subsequent advantage of allowing the sac to empty itself completely, without further interference, which certainly happened, as the case gave no further trouble.

"*Remarks.*—These cases of abscess do not differ essentially in their nature from abscesses in general, but derive their peculiar interest from their situation alone; and as, according to the adage, to be 'forewarned is to be forearmed,' I may save some of my professional brethren much anxiety by having given them a hint regarding the formation and means of diagnosis of abscesses in this region of the body, I have presented the details at what some may think a greater length than their importance demands. When, however, we consider the comparative frequency of inflammation in the air-passages and surrounding structures, more especially in children and infants, practitioners cannot be too well acquainted with every concomitant circumstance that may assist the diagnosis in each particular case. Indeed, no one who had not really seen such cases as those described could believe the difficulty in the diagnosis in the earlier stages of the disease. For my own part, although watching my little patient carefully for some days, it was only when the case reached its height that I was sure of its real nature. Many might think they had to treat a case of ordinary laryngitis, when the violence of the dyspnœa suggests a particular examination of the air-passages, and an abscess is discovered.

"As to the exact situation of the abscess, I believe in both cases, that it was about the fourth cervical vertebra, or between the fourth and fifth; but it is difficult to fix its real position, as the movable pharynx ascends when the tongue is pressed down. But from the



great obstruction which it causes to the respiration, it appears to be immediately behind the larynx.

"The treatment when the real nature of the case is made out, is simple enough, viz: to open the abscess in the mesial line, and at the most favorable point for the free exit of the pus. In order to avoid the loss of blood, which is of importance when the child is weak, and to prevent the necessity for a second operation, I would not recommend the use of the lancet until the abscess became well defined.

"The causes of pharyngeal abscess may be found in that of abscesses in general, and, consequently, the prophylactic as well as remedial measures must be adapted to the exigency of each particular case. But as my object in this paper has been merely to call attention to the termination of the inflammatory process, and to put upon record these two cases, it is not necessary to go into the origin and history of this very rare and highly interesting affection."—[*Amer. Jour. of Med. Science.*

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### *Minute Anatomy of the Liver.*

The minute anatomy of the liver has been lately examined by Beale,\* who, from his dissections and injections, comes to the following results:—

1. That the essential constitution of the liver is that of a double network of minute vessels, one of capillary bloodvessels, and another of cell-containing tubes, naturally adapted to each other. Both of these sets of tubes in each lobule appear to communicate with those of the neighboring lobules in all livers excepting that of the pig; and this circumstance is connected with the fact, that in all other animals but the pig, the hepatic lobules are not isolated by intervening and limiting fibrous tissues or capsules. As to the latter position, Beale agrees with Weber.

2. That the cell-containing tubes are in all vertebrata continuous with the ultimate fine ducts of the viscus; in some cases directly so, whilst in others, as in the rabbit, and slightly in man and the dog, a fine network of the ducts themselves intervenes. The basement membrane of these tubes being, after foetal life, incorporated with those of the capillaries, so that the secreting hepatic cells are only separated from the stream of blood by a single intervening membrane. The cell tubules contain the hepatic cells, as also granular and coloring matter and cell debris; the cells observing no order of arrangement, as some have thought, and contrasting in size, &c., greatly with the epithelium lining the ducts, from which they are strictly separated.

3. That the fine ducts are many times narrower at the point where they are continuous with the cell tubes, than those tubes

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\* Proceedings of the Royal Society, June, 1855.

themselves; and that the larger ducts and larger interlobular ducts freely anastomose with each other.

4. That whilst the finest biliary ducts are only composed of basement membrane, that of the larger ones is more complex, containing numerous cavities; especially in the pig, which, although generally considered to be glands, are in fact reservoirs for the bile, retaining it, and bringing it into intimate relation with the abundant surrounding bloodvessels, so that it may undergo requisite changes. This the author also considers to be the function of the vasa aberrantia, so named by Weber.

In this view, it will be seen that Beale considers the structure of the liver to be strikingly different from that described by Kolliker and Hanfield Jones, and assigns a different office to the secreting and epithelium cells; for, whilst the latter looks upon the cells of the ducts as chiefly forming the bile, Beale considers that they stand in relation to the hepatic cells as the columnar epithelium (lining the stomach tubes) does to the secreting cells at the bottom of them.

Beale prepared his specimens by injecting the portal vein with lukewarm water until the bile was washed out of the ducts by it, and then injecting the ducts; after which the portal vein was injected with size. The ducts were also examined in specimens hardened in alcohol, to which a solution of soda had been added, in order to render the sections transparent.

Dusch\* finds that the hepatic cells are dissolved in bile and in solutions of glycochlorate of soda. They also enlarge on the addition of chloroform, according to Lereboullet, their contents becoming very clear.—[*Brit. and For. Med. Chir. Rev.*

We find in the "*American Medical Monthly*," a report of some exceedingly interesting "Practical Lectures on Military Surgery," delivered at the New York Medical College, by Isidor Gluck, M.D., Chief Surgeon to the Hungarian Hussars, and to various Hospitals during the late war in Hungary, &c., &c. His description of the mode of using Gypsum or Stucco bandages in the treatment of fractures on the field of battle, will suggest to the ingenious surgeon the use of such dressings in civil practice.—*Western Lancet*.

### *Gypsum or Stucco Bandages.*

"Although even in compound fractures, where the wounded place has to be left uncovered, the application of Scutin's starch bandage answers this purpose best, still there are some objections to its being used in the field, or even in the hospital.

1. *It dries too slowly*, and cannot replace therefore *immediately* manual extension, that is required in order to retain the ends of

\* See Canstatt.

the broken bone in mutual contact. It is, therefore, necessary to use machines or apparatus till the bandage becomes dry for 24-48 hours.

2. The *thickness* of the walls of the bandage *diminishes*, while the bandage becomes dry, and thus receding somewhat from the limb, cannot serve instead of the *manual extension*.

3. The application of the starch bandage costs on the field much time and trouble. The limb must first of all be surrounded by a roller, then covered with compresses, and rollers; pasteboard and splints are then applied, and the whole again surrounded by a roller. The application of openings (windows) in Scutin's bandage is combined with difficulties. If the windows are made at the time when the bandage is applied, the same keeps *badly* together, the fractured ends and wood or tin splints must be used; if the windows have to be made when the bandage is *dry*, the wounded portion remains covered for a day or longer, and the excision or formation of the openings is in the hardened starch bandage yet more troublesome.

4. However dexterously we may apply the bandage, it will be pretty difficult to make so large openings as required, in order to expose the injured portion without loosening at the same time the *whole bandage*, while small openings or windows expose but a *portion* of the injured part.

5. In suppurating wounds, the pus discharged, as well as the fluid applied for cleansing the wound, and the moisture of the cataplasms, will run under the bandage and destroy the epidermis.

6. The hardening and unequally contracting starch bandage, (i. e. quickly hardening at its thin portions and slower in its thicker ones); exerts an unequal pressure and therefore an injurious effect on the *swollen parts*.

7. The starch bandage cannot be applied for transporting the wounded soldier, who receives on the battle-field a compound fracture, because it requires warm water, (not always ready in the field) for preparing it; then again it dries slowly, the formation of windows causes loss of time and trouble, requiring the application of splints, and because the parts being covered for a day or two, are injured as suppuration may follow, and the pus stagnates and runs into the bandage: in damp weather it becomes *moist* and *soft* in the rain; it is, therefore, necessary to have ready made *capsules* of starch bandage, and the so-called *movo-amovible* bandage, which often do not appose sufficiently, and cannot therefore replace *manual extension*.

Recently gypsum bandages have been suggested in Belgium, but their application, according to Dr. Mathieson and Van De Loo, is troublesome, and takes much time, so precious on the battle-field. This bandage is not lasting, its preparation and preservation still more difficult than that of Scutin's starch bandage, much more preferable and practical is the preparation and application of *gyp-*



*sum bandages*, as made by Pirogoff,\* and used by him to the greatest extent with the best results.

The gypsum bandage is, *on the battle-field*, in many respects preferable to the starch bandage.

The gypsum solution requires but *cold* water, and turns *hard* as soon as applied, and replaces therefore *immediately* manual extension, and neither machines nor apparatus are required for that purpose. The dry gypsum bandage becomes so hard, that *no* splints are required, even if large windows are made, and transporting of the wounded soldier is, *immediately* after the application of the bandage, possible without injury.

The gypsum bandage is *simple* and *cheap*, as it consists of old *coarse linen* and *gypsum*; its application is simple and quickly made. The gypsum bandage replaces manual extension *perfectly*, the assistants need only for *a few minutes* keep the limb extended after the bandage has been applied, then the gypsum bandage is *stiff and hard* enough to retain the ends of the broken bone in the position given to them. Their displacement is *impossible* as long as the swelling does not diminish, and a *considerable* interspace is not formed between the limb and the bandage. Thus the gypsum bandage renders superfluous all machines for extension, as required, while the *starch bandage* becomes *dry*. Only by the application of the gypsum bandage in *oblique* fractures of the *thigh* it is necessary to fix the pelvis, and to retain the limb extended by means of a *bed-table*, and by weights attached to the extremity.

More apparent yet are the advantages of the gypsum bandage in oblique fractures, where the ends of the broken bone are *distant* from each other, in compound fractures and generally everywhere where it is necessary to keep open a wounded spot.

In Pirogoff's mode of applying the gypsum bandage, the openings (windows) may be made *at once*, through them it is possible to view the position of the broken ends, the excoriations and wounds, and the curative process may be watched in its course.

The gypsum bandage does not contract like the starch bandage, interspaces form *slower* between it and the leg, as in the gypsum bandage the interspaces depend upon the *decrease* only of the swelling, and not like in starch bandages also, from unequal hardening of the bandage, and then again it does not become moist and soft in rainy weather.

In complicated fractures the pus may be discharged, and find exit through the large windows made, and does not burrow itself *under* the bandage as is common in the *starch* one.

Wet dressings are applied *immediately* on the wound itself. The gypsum bandage becomes hard immediately after having been applied; wounded soldiers may therefore be safely transported *immediately* after application of the gypsum bandage, from one place to another, even in the rain, without the bandage being dis-

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\*Prof. of Surgery in St. Petersburg (Russia.)

turbed, although the gypsum bandage may appear *wet* externally, which sometimes lasts for a few hours.

The gypsum bandage may therefore be cut through immediately after the application in the interspace of the splints, if that should be required, in consequence of too great a pressure or pains, &c.

In the battle-field, as well as in the hospitals, for transportation of the wounded soldier in the treatment of complicated fractures, with great dislocation of the ends of the fractured bones, the gypsum bandage is preferable to every other kind of bandages.

*Requisites necessary for the application of Gypsum Bandages in the battle-field as well as in the hospitals.*

1. Long, old hospital stockings made of linen, cut in front along the seam, (if the seam is behind the stocking it must be turned and cut); old drawers also cut along the seam, and divided for one or the other limb; sleeves of old shirts, (or instead of those, long linen flaps cut in the form of stockings); drawers or sleeves; jackets or old vests, abdominal bandages covering the body once and a half; for fractures of the bones of the rump, pelvis, and of the neck of the thigh bone.

These pieces of linen used for surrounding the limb must be equal, soft and dense. All seams must be removed.

2. Cotton or cleaned soft flax, pads filled with soft material, lint or flax for filling up, (for instance, around the trochanters, around the malleoli in the popliteal region, and around the achilles tendons) simple and graduated compresses.

3. Splints of different dimensions in regard to length, width and thickness, made of old coarse sack linen, as used for instance in hospitals for mattresses or straw mattresses.

The old sack linen is folded twice, thrice, or four times, to the width of two fingers to one-third of a yard. The splints must in fractures of the leg, the upper and forearm, exceed at least one-third of a yard the fractured bone, and in fractures of the thigh, and that of the neck of thigh it must be one-third of a yard longer than the whole extremity.

4. Strips (compresses) of the same linen from two inches wide, and of such a length as to surround the limb once or twice; they are calculated to fasten the splints, and are called *transversal* stripes. (Pirogoff.) These transversal stripes may be made also of fine linen, if the bandage should be a light one.

5. Plaster of Paris (gypsum) in form of fine powder and well dried. For the application of a bandage, never less than 2 lb. have to be used, (as for fracture of the forearm,) nor more than 7 lb., as for fracture of the neck of the thigh bone.

6. A vessel with cold water. The gypsum solution should not harden sooner than in five or eight minutes, in order to allow the application of the bandage. Although hardened, it still looks wet

from the evaporation of the water, out of the bandage painted over with gypsum solution, and the patient may safely be carried with it.

7. *Large brushes* as used by house painters.

Besides those necessary requisites in hospitals, may be used finer linen rollers for simple fractures and splints made out of paste-board, and for complicated fractures, with large wounds, *splints of wood*, of different dimensions, together with pads attached to them on both ends, and also a few pieces of sheet iron or tin may be held ready.

*The Application of Gypsum Bandages, is made in the following way:*

The injured limb is first surrounded with dry linen, a sleeve, a linen stocking, or with half a drawer.

Bony prominences must be wadded, and hollows filled out with cotton. The linen surrounding it must not be too thin, nor have holes in it, in which case the linen must be doubled, or the limb first covered by cotton. If this is not done the moisture passes to the skin, and the patient complains of a cold or burning sensation.

2. The broken limb is put in the required position, the extension is then made, and the fractured ends then approximated. Sometimes it is necessary to begin with the reduction, and subsequently follows the surrounding of the limb.

3. The splints and the transverse strips of sack linen, each three or four times folded, are put near the patient *in that* order as required to be later applied to the limb.

An assistant prepares the solution of gypsum, and paints with it the splints and strips, or rather dips them into the solution and brushes them with it.

4. The proper application of the bandage depends now upon the gypsum solution. If the solution be too *thick* it dries *quick*, the splints and transverse strips are not *united* firmly together: nor are the splints firmly fixed if the solution be too thin. When the solution becomes denser, water must not be added to it, as the solution becomes through it creamy, is not imbibed by the linen, cannot be smoothed, does not adhere, and takes a long time to become dry.

5. The splints and strips of linen must be dipped in the solution, which I now prepare by adding to two pounds of water the equal weight of gypsum. They must be extended and swinging free, and must thus be brushed over on both sides with the gypsum solution.

6. The splints must be applied longitudinally to the limb, and must be fixed by the transverse strips, carried around both the limb and splint. The transverse strips are applied in pairs, so that the one should cover the other partially.

The splints may be applied in such a manner that the one should



cover the other partially, or, what is preferable, in such a way that between the splints should remain a free open space on *the side in front of, or behind* the limb. The assistants producing extension must continue to do so until the bandage is *hardened*—i.e., about eight minutes after the gypsum bandage has been applied. During its application the limb must be kept extended free, in order to be accessible from all sides. The splints must be pressed firmly to the limb by the hand. The *transverse* strips must be drawn firmly and tightened around the limb, and by the hand or brush well covered with gypsum solution, in order that all prominences and hollows should be equalized. In oblique fractures and dislocations of the fractured ends, at least two layers of transverse strips are necessary. But if the bandage has yet to be removed, it is necessary—

1st. To apply the splints so as to leave a space between them.

2d. The transverse strips are covered from the middle (where about the extent of two inches remains uncovered) towards their ends with gypsum solution.

3d. The transverse strips are applied so that the uncovered part should correspond in its situation to the longitudinal interspace between the splints.

In the field it is necessary to have arranged, before the application of a bandage, all requisites in one package for each fracture separate. Thus, for fracture of the forearm the bandages should be separate from those for fracture of the leg."

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*Report of Three Cases of Dislocation of the Femur Reduced by Manipulation.—New Method of Reducing Dislocations of the Femur on the Pubes.* By E. J. FOUNTAIN, M.D., of Davenport, Iowa.

Recently I sent to Dr. Reid, of Rochester, New York, a brief report of three cases of dislocation of the thigh,—one of dislocation upon the dorsum ilii, and two upon the pubis—all reduced by manipulation. At his suggestion, I send a full report of these cases for publication. The case of dislocation upon the dorsum was reduced very quickly and easily by following exactly the directions given by Dr. Reid, with whom this vastly improved method originated. The two dislocations upon the pubis, I reduced by manipulations based upon the same principles; but by a mode of manipulating quite different from that required for the reduction of a dislocation upon the dorsum ilii. The report of these two cases will be the first of the kind upon record. A concise summary of the rules for the operation will be appended to the report.

*Dislocation upon the dorsum ilii.*—Oct. 7th. I was called in the night to go in haste to the relief of a lady, Mrs. S—, who had received, as stated, some serious injury of the hip, or thigh, by being thrown from a wagon. I was accompanied by my partner, Dr. Adler. We found the patient in bed, complaining of pain in the

left hip. The examination revealed at once the nature of the injury, which was a dislocation of the left femur upon the dorsum ilii. On placing the patient erect, the characteristic appearance was presented. The knee resting upon the lower third of the thigh, the great toe of the foot upon the instep of the opposite limb, and the trochanter major approximated to the crest of the ilium. The diagnosis was confirmed by an attempt to rotate and abduct the limb. A mattress was thrown upon the floor, and upon this the patient was placed upon her back. A towel was carried around the sound thigh and hip, and held down by Dr. Adler; but this assistance I found to be quite unnecessary. I then grasped the knee with my right hand, and the foot with my left; flexed the leg on the thigh, and carried the knee and thigh over and upon the sound one, and then upwards as high as the umbilicus, keeping it constantly pressed down upon the body. I then carried the knee outward, bringing the heel inward and the foot over the opposite limb, at the same time making gentle oscillations of the thigh, when the head of the bone slipped suddenly into its socket. The force required was quite moderate, and the pain almost nothing. The time occupied by the manipulation, from the instant I took hold of the knee and foot, until the operation was completed, did not exceed *ten seconds*. The manipulations were made by one continuous uninterrupted motion. The knee was caused to make a "semi-circular sweep" over the sound limb and across the body, then a few quick oscillations, and it dropped down into its natural position. I held the thigh up firmly and steadily, while making the oscillations; and in this position, at right angles with the axis of the body, and abducted, and the foot over the opposite thigh, the head of the bone entered socket.

*Dislocations on the Pubes.*—*Case 1.*—In June, 1854, I was called to see a man who had fallen from the second story of a house to the ground, upon some pieces of timber. His lower jaw was fractured, and his left hip dislocated. The limb was a trifle shortened and the foot strongly everted. The prominence of the trochanter major was lessened, and the head of the bone could be felt upon the pubes. While waiting for the appearance of Dr. Arnold, who had also been sent for, I was reflecting upon the necessary arrangements to be made for the application of the *pullies*. While thus meditating upon the subject, I began to think of the possibility of reducing the dislocation by manipulation. Considering the position of the head of the bone and its relation to adjacent parts, it occurred to me that by rotating the limb still more strongly outward, I might elevate the head of the bone from its resting-place—the trochanter major acting as a fulcrum. Then, by carrying the leg and foot, and after it the knee and thigh, over the opposite thigh, while the limb was still strongly rotated outwards, the head of the bone would be made to move upwards and outwards in the arc of a circle of which the trochanter major would be the centre, and

the neck the radius. After being thus brought over and upon the edge of the acetabulum, a motion of the limb directly upwards would, in the same way, throw the head of the bone into its socket,—the muscles attached to the trochanter major holding that point comparatively fixed.

Before the arrival of Dr. Arnold, I had determined to test the theory; and on explaining my views to him, he at once expressed his willingness to have the attempt made as I suggested. At worst, it could only fail without much, if any, harm, and then we had the pullies ready for application after the "classical method."

The patient was placed upon the floor on a quilt. Being a man of strong muscular development, I thought there would be more certainty of success if relaxation was first produced by the inhalation of chloroform. He readily came under its influence. When quite unconscious, the limb was taken by the foot and knee and rotated outwards, the leg flexed and carried over the opposite knee and thigh, the heel kept well up, and the knee pressed down. This motion was continued by carrying the thigh over the sound one, as high as the upper part of the middle third, the foot kept firmly elevated. Then the limb was carried directly upwards by elevating the knee, while the foot was held firm and steady, at the same time making gentle oscillations by the knee, when the head of the bone suddenly dropped into its socket. Time required in the operation, from twenty to thirty seconds. The force used was slight; I believe it could have been reduced about as well without the chloroform.

*Case 2.*—Oct. 31st, 1855.—John McCarthy, an Irishman, had his hip dislocated by falling with a horse he was riding. The horse slipped and fell, rolling over upon him. I found the limb about the same in length, as the sound one; but greatly everted, the toes pointing directly outward. On attempting to rotate and flex the limb, pain was produced, and a comparative immobility manifested by resistance. The head of the bone was felt forward upon the pubes. As soon as I discovered it was a dislocation, my first thought was to send for Dr. Adler to witness the operation. But the temptation to take hold and reduce it immediately, was too strong. The patient was resting upon a low couch. I immediately took hold of his knee and foot, rotated outwards and flexed the leg by carrying the foot over the sound thigh, keeping the heel well up, and pressing the knee down. After I had brought the thigh in this way over the upper part of the sound one, I carried it directly upwards, holding the foot firmly up and making oscillations by the knee, when the head of the bone slipped into its socket, and the limb at once assumed its natural appearance and mobility. A little more force was required in this, than in the other case; but it was still quite moderate, and the pain very slight. In this case I had no assistance whatever. Time occupied in operating, about twenty seconds.



The history of these cases fully demonstrates, to my mind, the immense value of this new method of reducing dislocations of the hip. Notwithstanding the unsatisfactory results of the trials at the New York Hospital, I have perfect confidence in the correctness of Dr. Reid's method of manipulation. It is certainly one of the greatest improvements of modern surgery, the value of which may be understood when contrasting an operation requiring but ten or twenty seconds and without pain, with the instructions of Sir Astley Cooper, viz: Venesection to syncope, hot bath, tart. antimony to nausea, and then the application of the pullies from four to six hours, if necessary! To Dr. Reid is due the credit of this splendid improvement, in which the whole profession must participate, as a most valuable contribution of scientific surgery to the relief of suffering humanity. It remains to be seen how far the test of future operations will confirm the value and correctness of the method of reducing dislocations on the *pubes*, as illustrated by the two preceding cases.

It is my opinion that dislocations into the thyroid foramen may be reduced by the same method as the last.

In conclusion, I will recapitulate the method of operating for dislocations on the *pubes*.

Taking the knee in one hand, and the foot in the other, rotate the whole limb outwards, and flex the leg on the thigh by carrying the foot over the opposite knee. Then carry the limb, foot forwards, over the opposite thigh, at the same time twisting the heel upwards, and pressing the knee down. Carry the thigh in this way over the sound one as high as the upper part of its middle third, then elevate the limb by raising the knee while the foot is held firm, at the same time making gentle oscillations, when the head of the bone will slip suddenly into its socket.—[*N. Y. Jour. of Medicine*.

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*Dr. J. D. Trask's Prize Essay on Placenta Prævia.*

The following are the corollaries deduced by the author of this interesting paper: (published in the Transactions of the American Medical Association.)

1.—“We have shown that, as a general rule, cases in which delivery takes place prematurely, are attended with greater risk to the mother than those occurring at the full time, with the exception of those before the seventh month, which rarely prove fatal, in consequence of the undeveloped condition of the blood-vessels of the womb at that early period. The probabilities of the child being saved are probably better at full term, though this is not so distinctly shown by our statistics. Hence, if it be possible, cases in which premature delivery is threatened ought to be conducted to the full period.

"This was the advice of Mr. Kinder Wood, a successful obstetrical teacher, who was in the habit of detaching the placenta in cases of dangerous hæmorrhage from its presentation. When hæmorrhage comes on before the completion of the term of pregnancy, absolute rest and cold, with, in some cases, opium, should be resorted to for the purpose of restraining hæmorrhage, *avoiding* the use of the *tampon* until the progress of the case indicates that extreme measures must be resorted to; for the introduction of the tampon, in the cases in which it is noted, was, in certain instances, soon followed by labor pains more or less effective. But, when its use is determined upon, a suppression of the hæmorrhage may be confidently relied upon for a time, at least, provided its introduction be skillfully effected. In many instances, however, at this early period, the hæmorrhage continues, and artificial delivery is the only resource.

2.—"Most cases of *partial* placental presentation require only rupture of the membranes. By this simple expedient, the uterus is brought into active contractions, and hæmorrhage restrained within, moderate limits, or entirely suppressed, until delivery takes place spontaneously, as occurs in a large proportion of cases, or is accomplished by art. But hæmorrhage, in cases of partial presentation, is not always thus controlled, and our first table furnishes not a few which were attended by most alarming loss of blood.\*

3.—"In cases of complete presentation, if hæmorrhage does not yield to simple measures, and in dangerous cases of partial presentation, early delivery is of the first importance. To select the most favorable opportunity, for this is often one of the most critical tests of the physician's skill. To do this before the os has become dilatable is to incur the risk of inflicting serious lesions upon the uterine neck, and a difficult and protracted withdrawal of the child; while, to wait unnecessarily long, is to expose the patient to great hazard from unnecessary loss of blood. The rule should be to wait not for a dilated, but a dilatable condition of the os. The great source of danger in the conduct of cases of placenta prævia is the delay required to permit the necessary dilatation of the mouth of the womb; while waiting for this necessary prerequisite to delivery, exhausting hæmorrhage has often taken place, from the effects of which the patient has never recovered.

"With the hope of keeping the bleeding in check during this necessary delay, the membranes may be advantageously ruptured; for we need not, in these cases, fear any embarrassment to delivery from this cause, inasmuch as the uterus is almost invariably relaxed after severe hæmorrhage. The administration of ergot, under such circumstances, in the manner already described, with the view of keeping up a pressure upon the mouths of the bleeding vessels until the os should dilate, is sanctioned by the results

\* Of the eight cases lost among Dr. Lever's cases, **four** were complete, and **four** partial presentations.

in some of our cases in which it was employed; and although not often given, as we judge, with this particular view, it promises to be, in many cases, a valuable resource. In Dr. Fountain's two cases of complete presentation, rapid dilatation took place under its repeated administration; a compression of the placenta was kept up until the os permitted the introduction of the hand for turning, and both mothers and children were saved. In this way we imitate, to a certain extent, the course pursued by nature in spontaneous expulsion of the child.

"The inhalation of *ether*, in one instance, quickened labor, and chloroform, in another, seemed to favor relaxation of the uterus. How far these agents, especially the latter, may prove subservient to this important object, experience has not yet determined.

4.—"But whatever means may be resorted to for keeping in check the flow of blood while the os is undergoing dilatation, the physician should not leave his patient after that process has begun. Dangerous, and even fatal, flooding sometimes takes place even when the os is yet undilated, as happened in a case recorded by Smellie. Dr. Rigby laid down the rule, that the patient should not be left by her physician after the placenta was discovered to be presenting. This rule he afterwards modified, as the interval, in such cases, is too long to justify the sacrifice of time. But the physician should remain beside his patient until active hæmorrhage has ceased; and if dilatation is in progress, it is imprudent to leave the bedside until delivery has been effected. It has occurred in the experience of every physician to be surprised by the unexpectedly sudden dilatation of the os in some cases of ordinary labor. On reading several of our cases, it is very apparent that from a neglect of the precaution here urged, the physician failed to be at hand when sudden and fearful hæmorrhage took place, followed by perilous and even fatal exhaustion. Such sudden losses of blood are not uncommonly accompanied by a degree of dilatation of the os uteri that would render immediate delivery inadmissible, as in Case 69, from Rigby.

"It corresponds with the experience of those who have had the largest opportunities for observation, and is an inference certainly warranted by a general survey of our cases, that of patients who enjoy intelligent and active medical assistance from the commencement of hæmorrhage until the termination of labor, a very large proportion are conducted through their perils in safety, and no inconsiderable proportion of the children are saved. An early delivery by turning has been sanctioned by long experience, as the best general mode of treatment for securing safety to mother and child.

5.—"But in some instances, hæmorrhage will not yield to the means thus far recommended, and the os continues unprepared for artificial delivery. In these cases we may separate the placenta, with the confidence of almost certainly putting an end to the



hæmorrhage, and with an almost equal certainty of destroying the child; unless the os should permit artificial delivery within a short time after the separation is effected. The urgency of the symptoms in such instances, is sometimes very great, and it must be left to the judgment of the practitioner, in each individual instance, to determine whether to separate the placenta or to wait still longer.

6.—“The os may be dilated or dilatable, and the patient in a state of extreme exhaustion. Here, turning could be performed with facility, but delivery would be hazardous. In these cases, the placenta may be detached with much less disturbance to the mother than would occur in turning under such circumstances, and an opportunity afforded for the patient to rally before she should be delivered. Table III. affords several instances in which spontaneous delivery took place after such separation, and the patient recovered. Yet even in these cases, we must bear in mind that children are by no means necessarily destroyed by excessive loss of blood by the mother; and a resort to the stethoscope would doubtless often prove of great assistance, where in doubt as to the propriety of detaching the placenta. When we have satisfactory evidence that the child is dead, there can be no objection to an early resort to the separation of the placenta.”—[*N. Y. Jour. Med.*

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*On certain forms of Fistula in Ano, with reference chiefly to their Treatment without dividing the Sphincter Muscles.*

Mr. Hird read, Oct. 20th, before the Medical Society of London, a paper on this subject, and also gave his opinion in favor of the treatment of many special cases of complete fistula by means of the ligature. After alluding to the painful and hazardous operations practised by surgeons for the cure of fistula until a more correct view was taken of the disease by Percevall Pott, by whose influence and example the barbarous treatment at that time had recourse to was renounced by the profession in this country, the author gave a minute description of the anatomical structure of the lower part of the rectum, and of the tissues which fill up the ischio-rectal fossæ, and observed that many obscure collections of matter can only be diagnosed by those who are familiar with the complicated fascial and muscular boundaries of the space surrounding the extremity of the gut. Mr. Hird then described the varieties of spontaneous abscess which affect this region, and gave the result of several cases of fistula which had not entered the rectum, or laid bare its walls, in which no operation was performed; and strongly opposed the assertion made by Mr. Syme, and many other surgeons who have written on this disease, “that all remedial measures, except the knife, are ineffectual.” As a preventive treatment against the formation of fistula, he urged the necessity of freely laying open all abscesses in the neighborhood of the rectum before the walls of the bowel are laid bare. The incision

should be directed from before backwards, and not transversely, so that the discharge may have no mechanical difficulties to overcome in its exit. When the abscess does not close by the ordinary process of granulation, Mr. Hird advises the use of mild injections of nitrate of silver (four grs. to the ounce), and the application of well-adjusted pressure on the part. In two cases of eight and ten years' standing in which this treatment was not successful, he effected a cure by means of a platinum wire heated by electricity, and connected with the poles of a galvanic battery, similar to the one used by Mr. Marshall for applying electric cautery to fistulous openings in the cheek, and advises the use of this agent before resorting to division of the septum. In cases of complete fistula, the author has no confidence in any treatment except that of laying the cavity of the abscess and of the rectum into one by dividing the sphincters. This, he said, might be accomplished either by means of the knife, the ligature, or electric heat. Although the knife is the favorite instrument of the majority of surgeons, he prefers the use of the ligature in all cases where the hemorrhoidal veins are unusually large, or when the patient has a dread of the knife. He considers, also, that this method of operating possesses advantages over the knife in many special cases, and, if judiciously applied, and only tightened by means of the fistula-tourniquet to a degree of tension sufficient to accomplish the division of the septum, is not so painful as the operation with the knife, less so in the after-treatment, and frequently accomplishes a cure in a shorter space of time. Hemorrhage and the dread of a cutting operation are avoided by this plan. Mr. Hird's experience does not confirm the opinion of Sir. B. Brodie, that all fistulæ have an internal orifice leading into the rectum; neither do his observations verify the opinion of many writers, that fistulæ are most frequently found in phthisical patients; but, on the contrary, are in harmony with the views of Andral and Louis, both of whom demonstrate, by statistical inquiries, that these affections, occurring simultaneously in the same individual, are merely the result of accident, and that they do not stand to each other in the relation of cause and effect.—[*Med. Times and Gazette*.

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*Tracheotomy in Croup.* By Dr. TROUSSEAU.

I am firmly decided, for my part, not to be discouraged, but to advocate tracheotomy with so much the more conviction, as the proportion of successful cases increase; and if that proportion remained, even as it was ten years ago, I will still proclaim the necessity of tracheotomy, and I would not cease to uphold it as a duty—a duty as imperious for a surgeon as the ligature of the carotid artery, after a wound of that vessel, even if death followed the operation as often as the cure. Here are the results of my operations for tracheotomy, during the year 1854:—I operated on

nine children. Of these, two died, while seven were cured, and are now living in perfect health. Certainly, the proportion of cured is not always so great; still, if I make the sum total of the operations I have performed in the last four years, I find twenty-four operations, and fourteen cures, equivalent to more than half.

At the Hôpital des Enfants Malades, in the last five years, the proportion of cures has been nearly a quarter. Here are the official numbers—viz:

|       |   |               |   |                       |
|-------|---|---------------|---|-----------------------|
| 1850  | . | 20 operations | . | 6 cures, about 1-3rd. |
| 1851  | . | 31            | . | 12 " more than 1-3rd. |
| 1852  | . | 59            | . | 11 " less than 1-5th. |
| 1853  | . | 61            | . | 7 " only 1-9th.       |
| 1854  | . | 44            | . | 11 " only 1-4th.      |
| <hr/> |   |               |   |                       |
| 215   | . | "             | . | 47 " about 1-4th.     |

This result is considerable, if we remember the social condition of the children who are brought to the Hospital, the deplorable treatment they are subjected to, by "sagefemmes," quacks, etc., in a word, those persons the poor generally consult in preference to doctors. We should bear in mind, too, the unfavorable condition of the Hospital, where the children operated upon are placed in the midst of the most varied and fatal contagion; so much so, that often, when the operation for tracheotomy is succeeding as well as could be desired, the scarlet fever, measles, small-pox, or whooping-cough, cause the most fearful complications.

I do not doubt that half the operations performed out of Hospital are successful, always provided tracheotomy takes place when the chances of cure are possible. This restriction is important; for, if the diphtheritic infection is thoroughly rooted in the system, if the skin, and particularly the cavities of the nose, are invaded by this special phlegmasia; if the quickness of the pulse, delirium, prostration, indicate a profound poison, and if the danger is rather in the general state, than in the local lesion of the larynx or of the trachea, certainly the operation should not be tried, for it is invariably fatal; when, however, the local lesion constitutes the principal danger of the disease, no matter at what degree asphyxia has arrived, even if the child has but a few moments to live, tracheotomy succeeds invariably, as well as though it had been tried three or four hours sooner.—[*Ibid.*]

#### *Excisions of Joints.*

On a recent occasion, Mr. Fergusson submitted to the inspection of the pupils of King's College Hospital, a number of patients on whom excision of the various joints had been performed from time to time, and took the opportunity of making some valuable remarks upon the improvements which had been made in this department of surgery, and upon the individual cases now submitted



to notice. He first made some observations upon the introduction of excision of the elbow joint, in the place of amputation through the arm. Passing a eulogium upon Professor Syme for the part he had taken in introducing and recommending this operation, he observed that it was not followed out even yet, as it ought to be, notwithstanding its acknowledged superiority over all other modes of treating incurable disease of that joint. As illustrative of these remarks, two patients were introduced in whom excision of the elbow-joint had been performed, in one of which it had not been done more than ten weeks, and yet the patient (a woman) had already got an excellent arm.

Mr. Fergusson stated that, in reference to this proceeding (in the elbow), there was now no question in the mind of any surgeon; but in the instance of some other joints, there had been much controversy, and he would now draw their attention to a case where he had performed the operation of excision of the head of the thigh bone several years ago with the most complete success. [The individual on whom this operation had been done, was brought into the theatre; he was a fine healthy young man, and walked with the greatest facility, and stated that he sometimes walked sixteen miles in the day]. He was particularly glad at being able to show them this patient, inasmuch as some very erroneous remarks had been made in reference to the propriety of this operation. Mr. Syme had, in his lectures in the *Lancet*, recently published, stated that, if the head of the thigh bone had been taken away with success, the limb could not be of any use for the support of the body; but those who now had the case before their eyes could see for themselves how gratuitous such an assertion was.

Three patients were next brought forward, upon whom excision of the knee-joint had been successfully performed. The first was a fine healthy woman, who had undergone the operation about two years since; a perfect ankylosis had taken place, and by the help of a high boot, well fitted to the limb, she walked with the utmost facility. The second was a little boy who had undergone the operation twelve months since, and could also walk, even without artificial assistance, with great facility; and the third case was also a lad upon whom his friend, Mr. Henry Smith, had operated nine months since, under the greatest disadvantages; but here also, as the pupils could see, the patient had made an excellent recovery, and could walk about with the same facility.

Mr. Fergusson made some lengthened remarks upon the operation in question, and stated that although, to his regret, most unjustifiable and unhandsome remarks had been directed by Mr. Syme against the promoters and pursuers of this mode of treatment, the proceeding had been followed out by several surgeons, and the success was so admirable that, notwithstanding the veto of the Edinburgh Professor, the operation was now fairly estab-

lished; taking the opportunity of eulogising Mr. Jones, of Jersey, and the late Dr. Mackenzie, for their efforts in this direction, he concluded his remarks by stating that he hoped his pupils would endeavor, in fitting instances, to follow out the same line of practice, for which they had ample authority in the cases he had just had the pleasure of bringing before them that day.—[*Med. Times and Gazette*.

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*Structure of the Spinal Cord and Spinal Nerves.*

In an inaugural dissertation before the University of Dorpat, by Philip Owsjannikow, the author has entered at great length on the structure of the spinal cord and spinal nerves. The conclusions drawn from the observations were as follows:—

1. That all the fibres of the spinal nerves which enter into the spinal cord are united to gangliated cells.

2. That one filament extends to each gangliated cell from the anterior spinal root, and one from the posterior root; a third, a commissural one, from the other part of the spinal marrow; and in many fishes a fourth, passing from the brain. The presence of this single fibre passing to the brain, may, as the author throws out, be of moment in reference to the question of the possibility of the same fibre being both afferent and efferent in function, a position which Du Bois-Raymond thinks tenable, as judging from his experiments, though, as a rule, this power is not put into action, in his opinion. The author of the paper now considered, thinks, on the contrary, this aforesaid power is always put into use.

3. That from each cell of the spinal marrow, a filament extends to the brain, forming the white substance.

4. That the chief mass of the spinal marrow, containing fibre and cells, is a united areolar web, which being arranged in great abundance about the central canal, and furnished with numerous bloodvessels, produces the ruddy gray color of the substance which is generally supposed to be owing to pigment cells.

5. That the gelatinous substance of Rolandi is connective tissue.

6. That the cells found as well in the posterior horns as in the surrounding substance of Rolandi, are corpuscles of the united web.

7. That the cylindrical axes are of a round form, and are composed of the same substance as the nervous cells.

8. That the cylindrical axes in the grey substance are formed of a membrane peculiar to themselves, which surrounding also the nerve cells, may be separated from the fundamental mass composed of the united web.

9. That in some fishes, the cylindrical axes of the spinal cord are exposed, the cellular web in which they are placed forming no especial investment.

10. That in those fishes which have anterior and posterior spinal roots, round gangliated cells are found, sending out in various directions divided branches.—[*Brit. and For. Med. Chir. Rev.*

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*Premonitory Diarrhœa.*

The New York Journal of Medicine, for January, 1856, contains an article by Dr. MACLOUGHLIN, of London, upon the Premonitory Diarrhœa of Cholera, from which we extract the following important conclusions:

1.—That cholera—that is, vomiting, spasms, etc.,—is always preceded by a diarrhœa, for a few hours, or for a few days, or for a few weeks.

2.—That there is, as yet, no well-authenticated case of cholera without an attack of spasms.

3.—That a painless diarrhœa may drain away almost the whole serum from the blood, until the blood has ceased to circulate, and until the heart has ceased to beat, before the patient is attacked with vomiting, spasms, etc., that is with the second stage of cholera.

4.—That if the disease is scientifically attended to in its diarrhœal stage, it can be cured, and, consequently, the developed stage prevented, and life saved.

5.—That these two pathological facts are now acquired to medical science, viz:—1. That every case of cholera is preceded by a diarrhœa, for a few hours, a few days, or a few weeks. 2. That the disease, scientifically treated in the diarrhœal stage, is easily cured.

6.—That it is in the power of human foresight to prevent an attack of developed cholera.

In a letter dated 2d July, 1855, inserted in the *Association Med. Journal*, it was attempted to point out what diarrhœa, if left to itself, will run into cholera in a few hours; and what diarrhœa, if left to itself, will not run into cholera for a few days, or for a few weeks.

“I am fully aware that this pathological point requires to be further studied. I, therefore, submit it to the profession, in the hope that more careful and more attentive observers will be enabled to give us valuable information on this important subject, so that the medical attendant, on arriving at the bed-side, may be enabled to pronounce whether his patient will be attacked in a few hours, or in a few days, or in a few weeks, with cholera, if the diarrhœa is not scientifically attended to, or whether the diarrhœa will be cured by the efforts of nature; and so that the medical attendant may not be left, as he now is left, to establish his prognosis on conjectures.

There is, also, another point to which I beg leave to call the attention of the profession.

I have now seen five severe outbreaks of epidemic cholera, and I have reason to believe that a great and an important change takes place in the constitution of every individual, where epidemic cholera is about to break out, which change in the constitution of every individual, persists while the disease rages, and after the disease has passed away for some time.



That this change in the constitution of individuals is manifest by the facts, that those of a costive habit, who have a passage from their bowels only every two, three, four, or five days, of hard faecal matter, have now a passage from their bowels daily, of soft faecal matter.

That those who are in the habit of having a passage daily, of solid faecal matter, have now two or three passages daily, from their bowels, of soft faecal matter.

That those who usually require laxatives to keep their bowels free, now do not require laxatives; or if they take any, they find that one-half, one-third, or one-quarter, the usual dose has the same effect as a full dose had formerly.

And further, that it is now dangerous to give a full dose of purgative medicine, lest this dose should induce diarrhoea, followed, too often, by fatal cholera. The *Medical Times*, of September, 1854, page 272, contains the report of four cases of cholera, which were induced in St. George's Hospital here, by the administration of the full dose of purgative medicine, and of which, one died.

That, further, every individual in the locality is troubled with more flatus than usual, especially between one and five in the morning, and that every one about to be attacked with diarrhoea has a pressure, and a weight on the sphincter of the anus, and a feeling of insecurity, as if at any moment, he would lose command over it.

If in consequence of the observations and of the researches of the profession in every country, it is ascertained that this change in the constitution of all the individuals in a locality where cholera is about to break out, does take place, and that this change persists while cholera rages, and after it has passed away some time, it may throw some light on the etiology of the disease, and prove that cholera is not a contagious disease."

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### *Skin Diseases.*

The following notes from Professor Hebra's Annual Report of Diseases of the Skin, treated at the Vienna Hospital, is from the *Assoc. Med. Journal*:

I. *Acne*.—17 cases (13 males, 4 females). Vapour bath and washing with soap and alcohol, sufficed to cure all these cases. There were 4 cases of the allied affection *syccosis*, all of which were successfully treated by inunction with iodide of sulphur ointment, and the application of strong nitric acid as a caustic.

II. *Ecthyma*.—13 cases (11 males, 2 females). generally associated with scabies or pediculi, and induced by the scratching. Warm fomentations sufficed for the cure.

III. *Eczema*.—150 cases (96 males, 54 females). Hebra includes under this term the various forms of impetigo, tinea, and porrigo; there being, as he believes, no difference between them and eczema impetiginosum; for, on destroying the efflorescences, or removing

the crusts and scabs, we then perceive the characteristic phenomena of eczema—red, moist places, with more or less infiltration of the cuticle. With regard to the cause of the disorder, it was traced with certainty to an elevated temperature (either exposure to the sun or working at the oven) in 22 cases; to irritation of the skin by ointments, plasters, etc., in 21 cases; to the repeated action of water in washing clothes, to fomentations, etc., in 9 cases; to scratching the skin, in consequence of the irritation caused by pediculi, in 20 cases; to varicosity of the veins in 19 cases; and in eight cases it was associated with anomalies of menstruation.

The modes of treatment were very various, but in each patient the system commenced with was adhered to.

1. In 46 cases, cold water alone was used, in the form of fomentations, baths, douches, etc.

2. In 6 cases, a wash of sulphate of zinc (3j to the pint of water) was used.

3. One case was treated with corrosive sublimate baths.

4. In 2 cases, the parts were kept moist with a dilute solution of potash (3j to the pint of water).

5. In 3 cases, the caustic action of a concentrated solution of potash (3j 3ij of water) was tried.

6. In 70 cases, soft soap was used. It was usually applied night and morning for three consecutive days, to the diseased places, which were then covered with flannel, and left untouched for four consecutive days. This process was repeated till the moisture and itching disappeared, and there was merely a red, dry, squamous surface remaining, (pityriasis rubra,) which was treated with tar.

7. In 19 cases, tar was used; the best being that obtained from the wood of the beech or of the juniperus oxycedrus (the product in this case being the oil of cade). The action of both these agents is nearly the same, but the latter is the least disfiguring, and, therefore, most applicable for diseases of the face. We have already indicated the proper period for commencing this form of treatment. The affected parts are smeared over once or twice a day, till an unbroken blackish brown investment is formed, which usually happens after about half a dozen applications. During this time, the parts must not be touched with water. The longer the tarry covering remains, the more certain is the result of its action. If it soon falls off, this is a sign that moisture is still exuding, and we must return to the preceding treatment (merely with soft soap).

8. In 3 cases, the expectant method was trusted to.

Whatever was the external treatment, internal remedies were at the same time used, to improve the general health: as, for instance, cod-liver oil in the scrofulous cases, aloes and iron in the chlorotic cases, etc.

IV. *Elephantiasis Arabum*.—6 cases (4 males and 2 females). In 5 cases, the leg was affected; and in one, the penis and scrotum. One patient recovered in consequence of prolonged pressure by

bandaging; and in 4 others, an improvement was manifested. One woman died from phlebitis, but compression had not been used.

V. *Favus*.—13 cases (7 males, 6 females). In all these cases the scalp was the seat of the disorder; and in this position the disease is especially persistent, from the fact that the peculiar microscopic fungi of favus occur within the hairs, which thus form a reservoir of spores, from which a new development of favus masses springs up when the older masses have either fallen off or been removed. [When favus occurs in any other part, it always runs an acute course, and disappears spontaneously in a few weeks.] The treatment consisted in keeping the affected spots as clear as possible, and extracting the diseased hair with the fingers.

VI. *Herpes*.—28 cases, (21 males, 7 females). One was a case of herpes circinatus, 2 of herpes iris, and the remaining 25 of herpes zoster. The treatment in all the cases was expectant.

VII. *Herpes Tonsurans* (occurring in 5 men), and *Pityriasis Versicolor* (in 13 men) were always cured in the course of a week or two by active inunction with soft soap, and then covering the part with flannel. The soap should be rubbed in for the space of ten minutes daily for from four to six days, and a layer of about a line thick left, before flannel is laid.—[*N. Y. Jour. of Med.*]

### Apoplexy in Relation to Chronic Renal Disease.

The following extract is from an interesting paper, by W. SENHOUSE KIRKES, M. D., in the *Med. Times and Gazette*.

The intimate connection thus apparently subsisting between sanguineous apoplexy on the one hand, and diseased cerebral vessels, enlarged heart, and renal disorganization, on the other, as deduced from the foregoing analysis, will, perhaps, be best apprehended by viewing the result of this analysis in a kind of tabular form. The 22 cases of sanguineous apoplexy may then stand thus:

| Cerebral Vessels.  | Heart.             | Kidneys.           |           |
|--------------------|--------------------|--------------------|-----------|
| Diseased . . . . . | Diseased . . . . . | Diseased . . . . . | 12 times. |
| " . . . . .        | " . . . . .        | Healthy . . . . .  | 3 "       |
| Healthy . . . . .  | " . . . . .        | Diseased . . . . . | 1 "       |
| " . . . . .        | Healthy . . . . .  | " . . . . .        | 1 "       |
| " . . . . .        | " . . . . .        | Healthy . . . . .  | 2 "       |
| " . . . . .        | Diseased . . . . . | " . . . . .        | 1 "       |
| Diseased . . . . . | Healthy . . . . .  | " . . . . .        | 2 "       |
|                    |                    |                    | —         |
|                    |                    |                    | 22        |

From this it appears that

|                                    |          |
|------------------------------------|----------|
| The Cerebral Vessels were diseased | 17 times |
| The Heart                          | " 17 "   |
| The Kidneys                        | " 14 "   |

It cannot but be evident from this impartial analysis of 22 fatal cases of sanguineous apoplexy, in which the different organs were



carefully examined, that disease of the kidneys, heart, and cerebral vessels stand in very close relation to the apoplexy; and this relation is the more evident when it is borne in mind that in more than half of the cases, the kidneys, heart, and cerebral vessels, were found coincidentally affected, while in only two cases was there absence of decided disease of any of these parts.

Such being the principal information yielded by an analysis of these cases, two questions seemed naturally to be suggested by it: first, what relation do the renal, cardiac, and arterial diseases bear to each other? Secondly, what share do they severally take in the production of apoplexy? As regards the relation subsisting between the renal, cardiac, and arterial disease in sanguineous apoplexy, I believe that the affection of the kidneys is the primary disease, and that the other lesions are developed secondarily, and in the order just indicated, viz.: hypertrophy of the heart, disease of the cerebral arteries, and extravasation of blood from rupture of these diseased vessels. That structural disease of the kidneys, of such nature as to interfere permanently, or for a long time, with their functions, has among its most frequent and prominent accompaniments, an hypertrophied condition of the left ventricle, is, as already said, a fact now almost generally admitted by pathologists. Of the various explanations of this pathological fact, the most probable, perhaps, is that which regards the blood as so far altered from its normal constitution by retained principles of urinary excretion, as to move with less facility through the systemic capillaries, and thus to require increased pressure, and consequently increased muscular growth of the left ventricle, to effect its transmission. To this, perhaps, may be added, among other additional causes, the direct influence on the circulation, resulting from the impeded transit of blood through two such large and vascular organs as the kidneys, in consequence of the structural change which has taken place in them. On whatever cause, or set of causes, it may depend, however, hypertrophy of the left ventricle of the heart, in consequence of prolonged renal disease, may, I think, be regarded as a well established fact; and to the affection of the kidneys, therefore, may be referred the enlargement of the heart found in 9 of the 13 cases of associated cardiac and renal affections in the analysis above given, and part of the enlargement noticed in the 4 cases where the valves were considerably diseased.—[*Ibid.*]

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*On the Real Origin of Varicose Veins of the Lower Extremities.*

M. Verneuil lately read a paper before the Academy of Medicine of Paris, on the above subject, in which he endeavoured to make out the following points:—

1. Whenever varicose veins which have sprung up spontaneously are observed on the lower extremity, there are deep veins similarly affected in the corresponding part of the same limb.

2. The converse, however, does not hold, for the inter- or intramuscular veins may be found dilated, without any change having taken place in the superficial vessels. But when the deep veins alone are found in an exposed state, it is almost certain that sooner or later the superficial ones will in their turn swell, become tortuous, and very apparent under the skin.

3. The varicose state of the veins of the lower extremity, as it is usually seen, does not primarily arise from the subcutaneous vessels (the internal saphena not excepted,) but generally from the dilatation of the deep veins, and most often from the muscular veins of the calf of the leg! The deep veins are first affected with valvular inefficiency and dilatation, and these two lesions then spread to the super-aponeurotic branches of the second and third order.

4. This succession of phenomena is not only made manifest by simple dissection, but also by a careful study of the special arrangement of the venous system of the lower extremity.

5. These facts, which may be looked upon as a new discovery, throw much light on the whole subject of varicose veins of the lower extremities. The etiology and symptoms of the affection are thus elucidated, and this circumstance allows of a more rational choice of therapeutical means.

6. The mechanism of relapses will henceforth be more easily understood; for it must be confessed that the obstinate return of the complaint, which experience shows to be so frequent, has been explained more by a train of reasoning than by direct demonstration.—[*American Jour. of Med. Science.*]

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*Description of a New Operation in Cases where the Joint has been firmly Anchylosed in the Straight Position after Injury.* By RICHARD G. H. BUTCHER, Surgeon to Mercer's Hospital.

There is a condition of the elbow free from disease, the result of injury, when it has become fixed by bony ankylosis in the straight position, that requires special notice. I at once cede the point that, by many, such an inconvenience might be borne with rather than running risks by submitting to a severe operation; but, on the other hand, there are some upon whom the effect would be to deprive them of the means of earning their bread, and, having no resources, would, of necessity, consign them to be inmates of a poor-house for the rest of their days. Here, I think, surgery legitimately offers her powers to relieve. In such a condition of parts I would not excise the joint, but would execute the following operation. I have frequently performed it on the dead body, and a dexterous hand may readily accomplish it in the living. The arm being placed in the same position as that for resection, an incision should be made, about an inch in length, behind the internal condyle, and the ulnar nerve freed from its bed, and drawn

forwards with a blunt hook; a second incision should pass outwards to the most prominent part of the external condyle, at right angles with the first, dividing the integuments and ligamentous expansion covering the olecranon. The fine blade of the saw which I use for resection being detached, it should be passed from the extremity of the transverse incision, that is, from without inwards, in front of the condyles and the joint, its flat surface being applied to them; the blade, being sharp at the point, can be readily made to pass along this direction, and by drawing the integuments a little in front of the internal condyle it will appear through the perpendicular incision, or that made in the first instance; the serrated edge may then be turned backwards, the blade connected with its frame, a few movements will sever all resisting parts from before backward, corresponding to the line of the transverse incision through the soft parts; the limb should then be bent at less than a right angle, and any vessels requiring ligatures must be secured. The after-treatment should be exactly in accordance with the rules laid down when speaking of resection. An operation accomplished after this plan is not, I conceive, nearly so serious a measure as excision of the joint; the brachial artery need not be considered in danger, except through undue rashness, and the hopes of a more perfect motion may rationally be expected, when no muscular attachments are divided.—[*Dublin Quart. Jour. of Med. Science.*

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*Diuretics in Renal Dropsy.*

The question as to whether diuretics should be employed in the treatment of those cases of dropsy, which, from the condition of the urine, are known to depend upon diseased kidney, is one of great practical importance. Our readers may be glad to know the opinion of so excellent a physician as Dr. Burrows, respecting it. A few days ago, Dr. Burrows, at the bedside of a patient who was recovering from a very severe renal dropsy, made the following remarks:—"I wish, gentlemen, that you should notice the treatment which has been here pursued. I well recollect that long ago it used to be Dr. Latham's observation that this form of dropsy was often very efficiently treated by the tartrate of potash. That salt was, indeed, his favorite remedy. Then came the addition to our pathological knowledge, and the announcement of the fact that the disease was essentially one of renal disorganization. From this it was thought to follow clearly, that whatever stimulated or irritated the kidney must do harm. Diuretics, consequently, fell into almost universal disuse. Latterly, however, some of us are again coming back to the old practice; we find that no other remedies effect so much for the relief of the patient as diuretics, and we, therefore, prescribe the latter. The matter is one of experience, and my own is to the effect that the kidneys, though in a state of



chronic disease, obey diuretics well, and that no inconveniences are produced." The prescription which the patient, in this case, had been taking was as follows:—℞. Potassæ tartrat. ʒss., spirit. æther. nitr. ʒss., aquæ piment. ʒj. Ft. haust. ter die. The case was, of course, one of chronic dropsy, and the diagnosis as to its renal cause, had depended upon the absence of cardiac disease, and the presence of a large quantity of albumen in the urine.—[*Med. Times and Gazette*.

*Bromo-Ioduretted Preparations*: translated from the French, by M. MORTON DOWLER, M. D., New Orleans.

The following is a summary of the conclusions arrived at by Dr. Lunier, in a long memoir contributed by him to *L'Union Médicale*:

PART FIRST. 1. The cod-liver oil acts at one and the same time by its oily matter, and by the iodine and bromine of potassium which enter into its composition.

2. These two haloid salts, favor the digestion of the oily matter, by increasing the activity of the pancreatic secretion.

3. This fatty substance, and highly combustible aliment, play an important part in the act of respiration, and in the development of animal heat.

4. The iodine and bromine associated together, act with much more energy than when separately administered.

5. That we can supply the place of the cod-liver oil, by the bromo-ioduretted preparation, associated with any hydro-carbonaceous substances, as chocolate for example.

6. The bromo-ioduretted medicine augments the secretion of the digestive juices, gives activity to the organic functions, and especially favors the development of the adipose tissue.

7. This agent sometimes determines on the skin and mucous membranes, a light inflammation, which has not, however, any tendency to suppuration.

8. It excites also, some cerebral affections, which take on the form of nervous fever, and more generally it puts on the form of general progressive paralysis.

9. The oily matter enters the digestive apparatus, or provides for the transformation of the immediate non-azotic principles.

10. The oily matter is deposited in the tissues when the oxygen introduced into the system is insufficient to consume it. (*Labrûler!*)

PART SECOND. 1. Leanness, which has not its origin in any serious organic lesion, is successfully treated by the cod-liver oil, or the bromo-ioduretted agent, mixed with oily matter.

2. Opium, more than any other medicine neutralizes the effects of this medicine; (the cod-liver oil) employed with precaution is capable of being useful in the treatment of obesity.

3. The bromo-ioduretted treatment would appear to modify, advantageously, certain diseases of the pancreas.

4. In phthisis pulmonalis, the cod-liver oil acts in a special manner, in furnishing an aliment to the pulmonary combustion ; (*un aliment à la combustion pulmonaire!*)

5. It is therefore contra-indicated in the acute stage of the disease, when there is an urgent necessity of leaving the affected organ in a state of repose.

6. The mineral waters, the fucus, the lichens, and sea-salt, owe their virtues, in the treatment of pulmonary consumption, to the iodine and bromine which enter into their composition.

7. In tuberculous chloro-anæmia, and in certain inveterate cases of chlorosis, the bromo-iodine treatment should be associated with the use of ferruginous preparations.

8. In scrofulous and syphilitic affections, in goitre and glandular enlargements, the bromo-iodine treatment succeeds by impressing on the capillary circulation, and the secretions, an excess of activity which eliminates the morbid elements from the organism.

9. It is especially to the fatty substance that we most attribute the good effects of cod-liver oil in rickets.

10. In chronic coryza and ulcerated ozæna, bromo-iodine treatment modifies rapidly the state of the mucus of the nasal fossæ.

11. This treatment, owing to its direct action on the uterus, and the active impulse which it gives to the capillary circulation, will often be employed with success to re-establish or excite menstruation.

#### 1. *Bromo-ioduretted cod-liver oil :*

R. Iodide of Potassium or of Iron, Bromide of Potassium or of Iron, of each, gr. iv. ; Cod-liver Oil (brown) ℥xvj.

Ft. Mist. secund. art., of which take from one to five spoonfuls daily.

#### 2. *Bromo-ioduretted oil :*

R. Iodide of Potassium or of Iron, Bromide of Potassium or of Iron, of each, gr. viij ; Neat's Foot Oil, or Sweet Almond Oil, ℥xvj.

Ft. Mist. secund. art., and take from one to five tablespoonfuls daily.

#### 3. *Bromo-ioduretted Chocolate :*

R. Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each, gr. iij. ; Cake Chocolate, Powdered White Sugar, of each q. s.

M. ft. secund. art. a mass of ℥viij, to be divided into troches, (tablettes,) of ℥j. each, of which from one to five are to be taken daily.

#### 4. *Bromo-ioduretted Biscuits :*

R. Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each, gr. iv. ; Bread Biscoté q. s.

M. ft. secund. art., ten biscuits, and take four or five daily.

#### 5. *Bromo-ioduretted Salt :*

R. Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each gr. iv. ; Gray Table Salt ℥iij.

Mix carefully, and preserve in a close vessel. Take from 3ij. to 3v. daily by salting.

6. *Bromo-ioduretted Butter :*

R. Bromo-ioduretted Salt 3v.; Fresh Butter 3xvj.; to be consumed in two or three days.

7. *Bromo-ioduretted Solution :*

|                                 | No. 1.      | No. 2.       |
|---------------------------------|-------------|--------------|
| R. Iodide of Potas. or of Iron, | gr. xix.    | gr. xij ss.; |
| Bromide of Potas. or of Iron,   | gr. xij ss. | gr. xix.;    |
| Extract of Gentian,             | 3ij.;       |              |
| Water,                          | 3xx.        |              |

M. ft. secund. art., a solution of which take from one to three tablespoonfuls daily at meals. The extract of Gentian ought to be left out when a nearly tasteless mixture is desired.

8. *Bromo-ioduretted Pills :*

|                                 | No. 1.      | No. 2.       |
|---------------------------------|-------------|--------------|
| R. Iodide of Potas. or of Iron, | gr. xix.    | gr. xij ss.; |
| Bromide of Potas. or of Iron,   | gr. xij ss. | gr. xix.;    |
| Powder and Syrup of Gentian,    | q. s.       |              |

M. ft. secund. art. pil. xl, of which take from one to three daily at meals.

9. *Emmenagogue Potion :*

R. Iod. of Potas. or of Iron, Bromide of Potas. or of Iron, of each, gr. iv. ; Syrup of Artimesia 3v. ; Distilled Water of Artimesia ; Distilled Mint Water, of each, 3x.

M. ft. secund. art., a portion of which take one or two tablespoonfuls every morning on an empty stomach.—[*New Orleans Med. and Surg. Jour.*

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*On the mode of Presentation of Dead Children in Labour.*

The *Association Medical Journal* for Aug. 31, contains an interesting paper on this subject by Dr. J. Mathews Duncan. The following are the author's conclusions drawn from the observations he has made :

1. The healthy foetus floats obliquely, with its head lowest, in a fluid of its own specific gravity—a position corresponding to that it has *in utero*.

2. The foetus has a specific gravity of about 1050, while that of the liquor amnii, at the full time, is nearly 1010.

3. Soon after the death of the foetus *in utero*, changes take place in it (probably chiefly in the brain) which alter its position of equilibrium in a fluid of its own specific gravity, so as to be generally the reverse of that of the healthy foetus; that is, so as to be oblique, with its head highest.

4. It may happen that an advanced stage of decomposition of the foetus, with collapse of the cranium, may make its position of equilibrium, when floating, again oblique, with the head lowest.

5. These circumstances have probably considerable influence in determining the frequent malpresentations of dead children.

[*Am. Jour. of Med. Sciences.*



## EDITORIAL AND MISCELLANEOUS.

*The Action of Medicines in the System ; or, "on the mode in which Therapeutic Agents introduced into the Stomach produce their peculiar effects on the animal economy."* Being the Prize Essay to which the Medical Society of London awarded the Fothergillian Gold Medal for MDCCCLII. By FREDERICK WILLIAM HEADLAND, M.B., B.A., F.L.S., M.R.C.S., etc. Second American, from the second revised and enlarged London edition. Philadelphia: Lindsay and Blakiston. 1856.

We took occasion to speak favorably of this work on the appearance of the first edition, and the correctness of our estimate of its value has been demonstrated by the early demand for another supply. It is certainly an excellent book for students as well as practitioners who may not have kept pace with the improved views of therapeutics. The action of medicinal agents introduced into the stomach is treated of under the heads of the following Propositions :

Prop. I.—That the great majority of medicines must obtain entry into the blood, or internal fluids of the body, before their action can be manifested.

Prop. II.—That the great majority of medicines are capable of solution in the gastric or intestinal secretions, and pass without material change, by a process of absorption, through the coats of the stomach and intestines, to enter the capillaries of the portal system of veins.

Prop. III.—That those medicines which are completely insoluble in water, and in the gastric and intestinal juices, cannot gain entrance into the circulation.

Prop. IV.—That some few remedial agents act locally on the mucous surface, either before absorption, or without being absorbed at all. That they are chiefly as follows :—

a. Irritant Emetics.

b. Stomach Anæsthetics.

c. Irritant Cathartics.

Prop. V.—That the medicine, when in the blood, must permeate the mass of the circulation, so far as may be required to reach the parts on which it tends to act.

That there are two possible exceptions to this rule :—

a. The production of sensation or pain at a distant point.

b. The production of muscular contraction at a distant point.

Prop. VI.—That while in the blood the medicine may undergo changes, which in some cases may, in others may not, affect its influence. That these changes may be—

a. Of Combination.

b. Of Reconstruction.

c. Of Decomposition.

Prop. VII.—That a first class of medicines, called Hæmatics, act while in the blood, which they influence. That their action is permanent.

1. That of these some, called Restoratives, act by supplying, or causing to be supplied, a material wanting ; and may remain in the blood.

2. That others, called Catalytics, act so as to counteract a morbid material or process; and must pass out of the body.

Prop. VIII.—That a second class of medicines, called Neurotics, act by passing from the blood to the nerves or nerve centres, which they influence. That they are transitory in action.

1. That of these some, called Stimulants, act so as to exalt nervous force, in general or in particular.

2. That others, called Narcotics, act so as first to exalt nervous force, and then to depress it, and have also a special influence on the intellectual part of the brain.

3. That others again, called Sedatives, act so as to depress nervous force, in general or in particular.

Prop. IX.—That a third class of medicines, called Astringents, act by passing from the blood to muscular fibre, which they excite to contraction.

Prop. X.—That a fourth class of medicines, called Eliminatives, act by passing out of the blood through the glands, which they excite to the performance of their functions.

The work is then concluded by considering the action of some of the more important medicines in particular.

It is for sale by T. Richards & Son, of this city.

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*Minutes of the Seventh Annual Meeting of the Medical Society of the State of Georgia, held in the City of Macon, April 9th, 1856.*

The Society assembled in Temperance Hall at 10 o'clock A. M., and was called to order by the President, Dr. L. A. DUGAS. The Recording Secretary, Dr. O'KEEFE, being absent, Dr. ELLISON was requested to act *pro tem*.

On calling the roll, the following members answered to their names:—

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Dr. R. D. Arnold, of Savannah,    | Dr. J. M. Green, of Macon,        |
| " J. R. Boon, of Macon,           | " M. A. Franklin, " "             |
| " S. W. Burney, of Forsyth,       | " D. W. Hammond, " "              |
| " H. F. Campbell, of Augusta,     | " G. Harrison, " "                |
| " G. F. Cooper, of Americus,      | " P. M. Kollock, of Savannah,     |
| " L. A. Dugas, of Augusta,        | " R. H. Nesbit, of Macon,         |
| " I. E. Dupree, of Twiggs county, | " Thomas Lamar, " "               |
| " W. W. Flewellen, of Columbus,   | " E. S. Way, of Pulaski county.   |
| " J. C. Ellison, " "              | " J. G. Westmoreland, of Atlanta. |

The minutes of the last meeting were read and approved.

On motion, the rules were suspended, and the following gentlemen, on written application, were duly elected members of the Society:—

Drs. C. E. Bellamy, of Columbus; B. S. Carswell, of Twiggs Co.; A. A. Trammel, of Forsyth; O. S. Proffit, of Jasper Co.; Ebon Hillyer, W. H. Oliver, J. H. Ethridge, of Atlanta; J. Harris, of Crawford Co.; J. R. Janes, of Starksville; W. E. Vason, of Albany; C. B. Sutton, of Lee Co.

The election of officers being next in order, a ballot was ordered, and the following gentlemen duly elected:

President—IRA E. DUPREE, M. D., of Twiggs county,  
1st Vice-President—THOMAS LAMAR, M. D., of Macon,  
2d Vice-President—S. W. BURNEY, M. D., of Forsyth,  
Cor. Secretary—F. C. ELLISON, M. D., of Columbus,  
Rec. Secretary—D. C. O'KEEFE, M. D., of Greensboro',  
Treasurer—C. B. NOTTINGHAM, M. D., of Macon,

Drs. Flewellen, Arnold and Burney, were appointed a committee to nominate delegates to the next meeting of the American Medical Association.

At 12 o'clock M., the hour appointed for the purpose, an interesting oration was delivered by Dr. W. W. Flewellen, of Columbus, upon "The Rise and Progress of Experimental Sciences.

After which, on motion, the Society adjourned, to meet again at three o'clock P. M.

#### AFTERNOON SESSION.

The Society was called to order by the President, and business was resumed.

Reports from auxiliary societies being called for, Dr. Ebon Hillyer presented a report of the organization, officers and members of the auxiliary society in the city of Atlanta—which, on motion, was received.

Written communications being next in order, Dr. Arnold presented an instructive and interesting paper upon the Relations between the Remittent and Yellow Fevers, showing conclusively that they were distinct diseases, and that they need never be confounded with each other. He also presented, for the inspection of the Society, representations in oil colors of the liver in Yellow fever, and in Bilious fever; that of the former being of a bright box-wood color, and the latter a decided brown. The discussion of this subject was continued for some time by Drs. Dugas, Campbell, Kollock, Hillyer, and others—all sustaining the views advanced by Dr. Arnold.

Dr. Arnold also presented for the inspection of the Society, a new and simple method of preserving specimens of morbid Anatomy.

Dr. Kollock next presented an interesting paper upon the Health of the City of Savannah, during the winter and spring of 1856—Epidemic Measles, and its complications with Pneumonia, Laryngitis and Varicella.

After which, the Society adjourned, to meet again at 8 o'clock P. M.

#### EVENING SESSION.

The Society re-assembled, the President in the Chair.

Dr. G. F. Cooper, who had just reached the city, appeared, and read a practicable and interesting paper upon the Influence of Diet in the Management of Diseases.

The Committee on Business, consisting of Drs. Dugas, Green, Kollock, Flewellen and Way, reported the following subjects and essayist, for the next annual meeting:



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- 1st. Dr. P. M. Kollock—on the Treatment of Vesico-vaginal Fistula.
- 2d. Dr. J. G. Westmoreland—What is the difference between the "Country fever" of the sea-board, and the Remittent fevers of the middle counties of Georgia?
- 3d. Dr. H. F. Campbell—Are there any means by which the extension of Yellow fever into the interior may be prevented?
- 4th. Dr. Joseph A. Eve—On the Diseases of the Cervix Uteri.
- 5th. Dr. L. D. Ford—On the connexion of Pneumonia with Remittent fever.
- 6th. Dr. C. B. Nottingham—On the Diseases of the Spinal Marrow.
- 7th. Dr. F. C. Ellison—On the relation of Epidemic Dysentery to Malarial fevers.
- 8th. Dr. W. M. Chartres—On the relation of Acute Meningitis to Malarial fevers.
- 9th. Dr. E. F. Way—On the Pathological difference between acute, articular and chronic Rheumatism.
- 10th. Dr. Ira E. Dupree—On the Treatment of Prolapsus Uteri.
- 11th. Dr. Ebon Hillyer—Under what circumstances is Trepanning justifiable?
- 12th. Dr. J. M. Green—On the value of Escharotics in the treatment of Cancer.
- 13th. Dr. R. D. Arnold—The Pathology and Treatment of Erysipelas.

On motion of Dr. Dugas, the Essays read by Drs. Arnold, Kollock, and Cooper, together with the Address of Dr. Flewellen, were ordered to be published.

On motion of Dr. Arnold, the thanks of the Society were tendered Dr. Flewellen for his appropriate and erudite oration.

The selection of orator for the next annual meeting being next in order, Dr. G. F. Cooper was unanimously elected, and Dr. R. C. Mackall his alternate.

The city of Augusta was selected as the next place of meeting. The Committee of arrangement are Drs. Campbell, Harris, Doughty, Walton, and Phinzy.

At a late hour, on motion, the Society adjourned, to meet again at 10 o'clock A. M., on the second Wednesday in April, 1857, in the city of Augusta.

F. C. ELLISON,

*Recording Secretary, pro tem.*

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*Mode of Testing the Translucency of Hydrocele.*—Dr. W. Frazer directs attention (*Dublin Hospital Gazette*, Nov. 1, 1855) to what he believes to be one of the best methods of employing the valuable test of translucency in hydrocele, a test which is practically so important as a differential diagnostic in discriminating between mere serous effusions in the cavity of the tunica vaginalis and various affections of the testicle, or scrotal hernias. Of course, every one is aware that the test is not free from objection; thus

it is almost or entirely useless in those instances in which the effused fluid is of very dark color, or is mixed with blood, &c., and also whenever the tissues of the tunica vaginalis are of unusual thickness, or are the seat of cartilaginous or osseous deposit, or when they are coated internally by the products of previous inflammatory action. Independent of these exceptional cases, there are a number to be met with in practice, in which the test is of value.

As ordinarily employed, by placing a candle at one side of the tumour, and excluding the passage of the light laterally by means of the hand, it is, at best, a clumsy proceeding, and liable to errors. I have found the stethoscope much more useful, as a means of excluding the diffused light, and by applying the eye to its expanded bell-shaped portion—the ear-piece being firmly placed upon the scrotum, held in a tense condition—we can even map out the state of the parts with tolerable accuracy, if the contained fluid be of ordinary character, and detect the position of the testicle by the opacity it produces, especially when it occupies any unusual locality, as the front or sides of the scrotum, or is adherent from inflammation after previous tappings. We can employ either a lighted candle or bright sunlight, as our best means of obtaining the requisite illumination; but even in diffused daylight I have succeeded very well in the manner I mention.—[*Am. Jour. Med. Sciences.*]

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*New Form of Astringent Application.* By Dr. WILLIAM BAYES, Brighton.—Pure glycerine dissolves nearly its own weight of tannin, affording a very powerful local astringent application.

The solution of tannin in pure glycerine appears to me to supply a desideratum long felt, and capable of a great variety of useful applications.

The solvent property of glycerine over tannin allows us to form a lotion of any desirable strength, as the solution is readily miscible with water.

The solution of tannin in glycerine, in one or other of its strengths, is peculiarly applicable to many disorders of the mucous membrane, readily combining with mucous, and forming a non-evaporizable coating over dry membranes; hence it may with benefit be applied to the mucous membranes of the eye and ear in many of its diseased conditions. It forms a most convenient application to the vaginal, uterine, urethral, or rectal membranes, where a strong and non-irritant astringent lotion is desired.

In local hæmorrhages, where the bleeding surface can easily be reached, it will prove very convenient, and may be applied either with a sponge or small brush.

The solution must be kept in the dark, and should not be prepared for any great length of time before used, or decomposition will occur.

It is singular that glycerine does not possess the same property towards gallic acid.—[*Association Med. Jour.*]

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*On Forcible Feeding.*—Dr. Szigmondy describes a simple and effectual means of administering fluid nourishment to persons who are unconscious, suffer from trismus, or obstinately refuse food. The patient is laid horizontally on a bed, with the head somewhat raised, and the food is poured by teaspoonfuls through the nostrils. Reaching the pharynx, the movement of deglutition is provoked; and as soon as this is perceived, another small portion is poured in. In this way too, physic can be given to children who resist. He relates a case of severe alcoholic coma, with spasmodic

closure of the jaws, which was speedily relieved by the introduction of a solution of tartar emetic. This means is far easier to practise, and causes less irritation, than the introduction of the stomach-pump.

Dr. Beer states that by the magnetico-electrical induction apparatus, the mouth can be sufficiently opened to admit of portions of solid food being introduced.—[*Wien Wochen.—Med. Times and Gaz.*]

*Ergot of Wheat.*—Dr. Jobert makes the following statement, as the results of his observations:—1. The medical and obstetrical properties of this ergot are as incontestable as those of the ergot of rye, and its effects are as prompt, as direct, and as great. 2. Its hæmostatic action appears certain. Dr. Jobert has administered it several times, against abundant discharges of blood, and immediately after labour it has almost constantly and fully succeeded. 3. In the dose of from one to two grammes, (fifteen to thirty grains,) according to urgency, in cases of uterine hæmorrhage during any period of pregnancy, it has frequently succeeded in lessening, if not in completely arresting, the hæmorrhage, and this without appearing to produce any stimulant action on the uterus.—[*Gaz. des Hôp. Asso. Med. Journal.*]

*St. John Long's Celebrated Liniment.*—The yolk of an egg; oil of turpentine fʒiss.; strong acetic acid fʒi.; pure water fʒiii.; first rub the yolk of the egg, the water, and the acetic acid together, then add the oil of turpentine, and agitate the whole until they are well mixed. This counter-irritant liniment is applied by means of a sponge; its effects vary with the force which is used in rubbing, and the length of time the application is continued.—[*Edinburg Med. Journal.*]

*Formula for the Internal use of Chloroform.*—M. Danneccy, pharmacien, at Bordeaux, recommends the following formula:—Pure chloroform, half a drachm; oil of sweet almonds, two drachms; gum arabic, one drachm; syrup of orange flowers, one ounce; distilled water, two ounces; mix the chloroform with the oil, and make an ordinary oily draught. The author also gives a very ready mode of testing the purity of chloroform. Mix the latter with some oil; if the chloroform be quite pure, the limpidity of the oil will not be destroyed; whereas, any chemical impurity, however small, will give rise to a cloud.—[*Lancet.*]

*New Treatment for Itch.*—MM. Dussard and Pillon assert that itch may be often cured immediately by painting the body over with chloruret of sulphur dissolved in sulphuret of carbon. The application kills the acari and their eggs. Sometimes it is necessary to repeat the application, as some of the acari, or some of their eggs, may not have been killed by the first.—[*Gaz. Hebdom. Am. Jour. Med. Sciences.*]

*Spender's Chalk Ointment in Ulcers of the Leg.*—Dr. Patterson has collected 125 cases of chronic non-specific ulcers of the leg, in which, under this mode of treatment, the cure has been rapid and complete. The following formula he prefers:

℞ Cretæ preparatæ, ℞iv.; adipis suilli, ℞i.; olei olivæ, ʒiii.

Having heated the oil and lard, add gradually the chalk, finely powdered.

The ointment and a bandage being once applied, it is left until the cicatrix forms and becomes firm.—[*Edinburg Med. Jour.*]



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## ORIGINAL AND ECLECTIC.

### ARTICLE XVI.

*The Value of Diet in Disease.* By G. F. COOPER, M. D., of Americus, Ga.\*

Although much has been written upon the value of diet, and the function of digestion, comparatively nothing has been done to direct attention to its value in disease, and to the importance of that function—though altered—in a morbid condition of the body. Among the many elaborate treatises upon these subjects—especially digestion—we know of none of any practical worth to the profession in the management of disease. In this respect we think we are, to some extent at least, at fault; and while we would dislike to see any abatement of the interest in the investigations on the one hand, it is very desirable, on the other, to awaken an interest not hitherto manifested. We propose, in this paper, to speak of the value of diet in disease, under two propositions:

- 1st. Its use in supplying the wastes of the tissues; and,
- 2d. In the maintenance of the function of animal heat.

And if these two uses of diet have justly deserved, and received, so much attention, physiologically, we feel assured their importance is in no sense inferior, nor should they receive less consideration in a pathological point of view.

It would be supererogation to dwell upon the part that diet

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\* This paper was read at the recent meeting of the State Medical Society, and ordered to be printed.

takes in supplying those wastes, constantly in progress, in a normal condition of the animal economy; this is more ably and elaborately discussed in our standard works, than it can possibly be done here. All recognize the necessity of these wastes being replenished, and look alone to the introduction of food, for the accomplishment of this end; yet, in disease, we can look indifferently upon the rapid destruction—moving apace before our eyes—without regarding it as a matter of much moment, and never dreaming how this devastation is to be stayed, or the wastes to be supplied.

In the treatment of much the largest proportion of diseases, one of the greatest desiderata is to husband the strength of the patient; ordinarily, however, we conclude, in view of the anorexia and impaired function of digestion, we can by no means look to diet to aid us; but by avoiding the imprudent use of depletents, to keep in store the requisite amount of strength, to enable the patient to endure, at least, the early period of his attack, though it have considerable duration. Emaciation, and consequent loss of strength, in abstinence, make much more rapid progress, in disease than in health, because there are other conditions present, which aggravate and expedite the work of destruction. It is true, there are no expenditures or wastes, from exercise, which are ever going on in health; but, whatever the advantage gained in this respect, it is far more than outweighed by the abnormal conditions intimated above; and however much this fact may be overlooked, in disease, it is one of no mean import, and should not be lightly regarded, but every effort should be made to counteract those morbid influences which wear down the energies of the subject, and which we, not unfrequently, though unwittingly, aid, by what is believed to be the only practicable and admissible plan of treatment.

In health, the processes of decay and replenishing are constantly active, but the supply is more than adequate to the demands of nutrition; for nature deposits in the adipose substance, a reserve, which is always furiously attacked in disease. The question is not to prevent waste—which is really depurative—but to provide material from without, and thereby preclude the drafts which would, otherwise, be made upon these resources which are provided, not only for a respectable embonpoint, but for our endurance both in health and disease.

The blood is the great medium through which all these important operations are effected; and while it conveys those nutritious substances which build and keep up the human fabric, it is no less the temporary receptacle of the noxious and effete matters, which it gathers in the remote points of its circulation, for the purpose of transmitting them to their proper places of exit. This being the office of the blood, we readily perceive how important that it be kept pure, and prepared to supply the various tissues and organs with such material as is required for their proper nutrition and functions. Now, one of the principal means of preserving the blood pure, is by proper supplies from without, and whenever they are cut off, every circuit the blood makes, of course only serves to augment its impurities; but when it is frequently receiving these accessions from external sources, whatever be the nature of its impurities, they are to a greater or less extent, as the case may be, constantly undergoing dilution, and the result is, not only the wastes are supplied, but all the organs are kept in a state of preservation, whereby they are enabled to perform their several functions better, and the laws of the economy, if not perfectly maintained, continue with, comparatively, little interruption. The blood, when deprived of its supplies, through the ordinary channel, would naturally invite them from the tissues, with which it is everywhere in contact; and here a remarkable difference occurs—for, while in health it receives its nutritious materials at or very near the centre of circulation, and the *debris* at its remote points, now, indeed, that is when external supplies are suspended, it takes in both at the same point, and the same instant, which must insure the more intimate mixture of the two qualities, thereby deteriorating the blood much more certainly than if its supplies had been received through (as they are mainly) the thoracic duct. In this state of things, a double, and, to some extent, unnatural action is forced upon the capillaries—whereas, normally, they are required only to receive the *debris* of the tissues; now, they must also receive the nutritious elements, because of their failure from without; and how far this action may go to engender irritation, and excite and aggravate disease, cannot, in this connection, be determined.

*Second Proposition: the maintenance of the function of animal heat.*—Whatever may be the contrariety of opinion of the exact



nature and source of animal heat, its existence and importance in the animal economy are known to all, and it is of equal moment that we elevate an abnormally low degree, as we must reduce an abnormally high one; for while the powers of the system sink rapidly in the former case, they are no less exhausted in the latter. In disease, we most frequently meet with an exalted degree of this function; and it would appear, from a cursory view of this subject, that the continued introduction of food would not only add heat to the flame, but serve to perpetuate the trouble. We think, however, this cannot be shown; but, on the contrary, as has already been intimated, the absence of food, necessarily, begets this very condition of the system, and the use of diet, instead of exciting, it seems reasonable to believe that its effects would be soothing, and would rather allay than provoke excitement. If we arrest the supply of water to the engine, the heat is not diminished, but increased; and as cold is often used to arouse the function of innervation, and thereby restore lost heat, as well as to reduce it when raised above the normal degree—so, in the body, the prudent introduction of food may both excite and diminish, augment and lessen the temperature. To say the least of it, we cannot hope to subdue an abnormal degree of heat, by studiously withholding food, when it is excited and kept up by other causes operating upon the fluids of the body, and changing their nature and unfitting them for their accustomed actions; but simultaneous with other treatment, we must essay, by the use of proper diet, to dilute and weaken, and, possibly, entirely overcome those causes, which, in the absence of food, would likely become intensified and greatly promote disease. The wrecked seaman, when the short supply of provision is exhausted, which, in haste, he snatched from the sinking ship, will prey upon his own flesh; and so of the body, when its external supplies fail, it turns upon itself, until its inward resources are consumed—every round of the blood lessening the store on hand, as well as adding to its own impurity, and soon the operations of nature cease.

In discussing the other phase of this proposition, that is, when the temperature is abnormally low, our way is apparently more clear, though we are not sure that stronger reasons can be adduced in its support; however, none will question the necessity of the rapid introduction, not only of food, but the most powerful stimuli, to excite and bring up the degree of heat, especially where its

failure is obviously owing to the want of adequate nourishment. When the animal heat falls suddenly below a healthy degree, we may reasonably suspect the nervous system, with which this function is intimately associated, and over which it exerts a manifest influence and control, to be involved; in this case, the use of food may, perhaps, be regarded of secondary importance, but by no means to be neglected.

As before stated, the blood being the medium through which this important vital action is effected, it can only do so when its character affords the requisite elements. It is apparent when the blood is deprived of its food from without, from which it derives those elements, required to meet and combine with the oxygen of the air, received through the lungs, it must be not only materially, but injuriously modified: nor can its drafts upon the supplies in store be responded to with that promptness, nor will they yield those qualities or elements, which the blood requires for a proper maintenance of this function, or which food, from without, affords. The capacity of the blood for the reception of oxygen, must become constantly less, and while this may be, in one sense, conservative, yet in the end it will tell upon the energies of the general system, and hastens the patients dissolution.

Respiration is ordinarily, in disease, accelerated, and while the capacity for oxygen may be diminished, the quantity of oxygen is, perhaps, in the main, increased. Now here, on the one hand, we have one element probably augmented—while on the other, when food is not taken, those elements with which it is to combine for the production of animal heat, will be found wanting; in which case the body, which has to furnish them, essentially provides the means of its own destruction.

The errors of the profession in the premises, to our mind, are two:—

1st. In regarding the appetite as the index to the wants of the system; and,

2d. That the function of digestion is, in disease, suspended; or incapable of preparing food for absorption and nutrition.

In disease, although anorexia may be present, the wants of the economy are imperious; and yet, because these wants are not indicated by any rational manifestations, we are ready to conclude there can be none—a great error: for we are not to suppose, from anorexia, that the system is free from want, but that it is evidence

of an impure state of the blood, and vitiation of the secretions; for this state of the secretions, even of the mouth, does, unquestionably, have much influence upon the appetite. Abstractly considered, I cannot understand why these wants do not exist, and why we do not proceed to their supply as readily as if the appetite were present to indicate them.

As a sentinel, who sleeps at his post, would fail to give the alarm upon the approach of the enemy, so the appetite does not, in disease, make known the necessities of the system, and the work of devastation, in case of abstinence, may progress covertly, while the physician is patiently waiting the return of the lost appetite, which we always hail with exultation, and regard as the harbinger of convalescence; it should never be considered, primarily, as evidence of want, or the re-appearance of the powers of digestion, but the resumption of the normal actions or functions of the body, which have been to a greater or less degree impaired: in this case, the "*vis medicatrix naturæ*" is entitled to the credit, rather than the doctor.

Now, we ask, what would be more likely to provoke appetite, restore a healthy state of the secernent functions, and aid in subduing disease, than the prudent allowance or introduction of food? In all cases, this would not be practicable, owing, mainly, to delirium; but, where there is sufficient mental clearness, the necessity and object of taking food may be, without difficulty, made obvious to the patient.

2d. We feel assured that it is erroneous to conclude that digestion, in disease, is suspended, or even measurably so, and incapable of exerting its peculiar actions upon food, and fit it for assimilation. Although the various organs of the body may be, more or less, impaired in their functions, yet we know they are not, ordinarily, suspended; and there is no just reason why digestion should be considered more at fault than the other functions—indeed, there is every reason to believe, from its position and importance to all the operations of the economy, it would be the last to succumb, or even become impaired.

We have so often observed food disposed of, comparatively, easy, and producing desirable results, that we are constrained to believe that digestion usually stands ready to do more, and better, than we are willing to allow; and unless there are indications which absolutely preclude it, we should presume upon the power



and readiness of the digestive organs to perform their part, at least, adequate to the wants, though unexpressed, of nature. As we would superintend and exercise control over a stubborn and capricious child, knowing better what he needs and what to provide for him, than he does for himself: so, in disease, we should become the guardians of our patients, knowing that the perversion under which the several functions may be laboring, prevent nature from exhibiting her usual mien, or making known her accustomed wants.

If we investigate the symptoms present in cases of starvation, or long abstinence, we cannot fail to recognize many features strikingly simulating those observed late in disease; nor would it be rash to conclude that, not unfrequently, they may be ascribed to the same cause in both instances, to wit: want of food. We mention these facts, more particularly, to show how absurd would be the attempt to restore persons in this starving condition, except by introducing food as rapidly as the nature of the case, and prudence, would permit. Because there are no local lesions, in the beginning, in one case, this fact does not abate the necessity of food in the other; nor could we be warranted in withholding it on this account, but guard against such improprieties as might lead to injury, or aggravation of disease.

A year or two since, the report of a number of cases of Continued fever appeared in the London Lancet, the treatment of which consisted, mainly, in the use of brandy, and the result was most satisfactory. This success may be explained upon the principle that the brandy afforded food, it being rich in those elements needed to combine with the oxygen received through the lungs, as well as giving tone to the general system. It has also been proposed to treat delirium tremens by the free, discrete use of diet; it being alleged that the delirium and vigilance are the result of abstinence—which is almost always the case in that disease—rather than the effects of alcohol, or loss of accustomed stimulus. We believe the suggestion one of practical importance, and meriting trial at the hands of the profession.

The state of the blood has never received that attention in disease that it truly deserves—perhaps the long reign of Solidism prevented it; but of late years, humoral pathology is so universally acknowledged, it seems that accurate observation, with experiments, should no longer be delayed. So far as can be known,

and is practicable, there should be an adaptation of food to the wants of the blood—that is, when the blood is defective in any of its normal qualities, we should have recourse to those articles of diet, simple in their nature, but abounding in those elements, of which the blood has been deprived, and vice versa, in case of excess. It is upon this principle we proceed in the dietetic management of diabetes, and with more success than by any other method.

Dr. Charles Hooker, in a late paper, entitled, “Report on the Diet of the Sick,”\* a synopsis only of which we have seen, the following statements occur:—“The appetite is regarded as nature’s proper guide, and the general principle is maintained, that, with the suspension of the gastric secretions, the stomach loses its digestive powers, and food can only prove a cause of irritation. This reasoning has led to most erroneous dietetic management.” He might have added, and by consequence, to most ruinous results. Again: “In diseases, generally, a return of appetite is regarded as a favorable symptom, indicating a returning healthy action and condition of the stomach.” Would it not have been more rational, and better in keeping with facts, to have said—“indicating a returning healthy action and condition” of the several functions, instead of simply that of the “stomach?” We are happy to find that we agree so nearly with sentiments from so distinguished a source, though we are compelled to dissent from some positions, or rather rules, which he prescribes for the dietetic management of the sick. In his first rule, he says: “The food should be completely masticated and insalivated before passing into the stomach.” The objection is not to the rule, but to the nature of the food implied. It seems to us, that when the secretion, and thereby the action of the stomach, are impaired, those substances should be ingested, which would require the least effort of that organ, and that would be easiest absorbed. Our chief reliance should be upon nutritious fluids, and looking to that other important action of the stomach, viz., venous absorption, for the ready conveyance of nutrient material to the general system; at the same time, let solid food be used as much as the nature of the case will allow.

Dr. Hooker, in his second rule, says: “Food should be administered at regular times, corresponding with the previous habits of the patient.”

In disease, generally, we must bear in mind, there is no appe-

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\* Made to the American Medical Association, Session for 1855.

tite, and so far as previous habits, in regard to eating, are concerned, we say they are measurably broken up; the patient would not, likely, relish food at one hour more than another; besides, the regular meal hours would not be sufficiently often, for the patient rather loathing food, and digestion more or less impaired, we can only give small quantities, and have these digested; they should, therefore, be repeated at rather frequent intervals, and thus we may introduce, in twenty-four hours, a considerable amount of nutrient material, without its proving nauseous to the patient, or taxing his stomach beyond its powers.

We cannot do better than insert his 4th rule entire. "Medication should be directed with a view to aid, and not impair, the appetite and digestive action. Without regard to this precaution, the purpose of restoring the appetite, and sustaining it during the progress of disease, will often fail. Medicines, nauseous to the taste, given just before eating, will sometimes effectually destroy the appetite for food. Thus, medicines, appropriate to a case, may do more harm than good, if given at improper times. Quinine, and other bitter tonics, judiciously employed, invigorate the digestive organs and improve the appetite; but for this purpose, they are best administered with the food. Their action, and the stimulus of food then coincide; but given between meals, or even half an hour or an hour before the food, they often spoil the appetite."

We must not forget that, in disease, most usually, we have no appetite to sustain—no appetite to spoil; and it is to this point we have endeavored, in this paper, to direct the attention of the profession—the necessity and practicability of using food or diet, without appetite—because it is just here, we think, most fault attaches.

From what has been said, it follows:—

1st. That, in disease, the want of food is obvious, although there is no appetite present to indicate it; and,

2d. That the use of diet is entirely feasible, and that the digestive organs are capable of preparing the requisite amount of food; and,

3d. The prudent and discriminate use of food tends to allay, rather than to aggravate disease.



## ARTICLE XVII.

*Health of the City of Savannah during the Winter and Spring of 1856.* (Read before the Medical Society of the State of Georgia, at its Annual Meeting, April, 1856, and ordered to be printed.)  
By P. M. KOLLOCK, M. D.

The winter which has just closed, has been the most intensely cold that I have ever experienced in Savannah, during a residence of thirty years. The mercury has been depressed to an extremely low point, and continued at that low point for a greater length of time, than has ever occurred before, within my remembrance. This hyperborean condition of the atmosphere, however, has not, as a general rule, exerted any deleterious influence upon the health of the inhabitants—the city having been entirely exempt from the prevalence of any epidemic during the winter months. Contrary to precedent—the succession of an early spring to a cold winter—all Nature seems to have been exceedingly averse to donning its vernal garb, and April finds us nothing loth to the occupancy of the seat in the chimney corner.

About the beginning of February, we began to be made aware that the healthful state of existence which had been so long enjoyed by our city, was about to be interrupted,—cases of measles presented themselves, and we very soon found ourselves in the midst of an epidemic.

I saw nothing of the disease until the 20th of the month. On that day, I was called to see Amos Henderson's son, Polk, and Wm. Black's son, Phineas; the former 5 years old, the other several years older.

The rational signs in these two cases were indicative of the approach of typhoid pneumonia. There were present, fever, with a very frequent, small pulse (120 in the minute) in Polk's case—the respiration labored and hurried (52 in the minute), cough, without much expectoration or pain—chest resonant on percussion—respiration bronchial, without râles. He was treated with cathartics of ol. ricin., alterative doses of cal. and pulv. Dover., sol. tart. ant. and nit. pot. and small doses tr. aconit.

On the 24th, the diagnosis of this case was decided by the appearance of the rubeolous eruption on the face. Immersion of the whole body in a warm bath brought out the eruption on the rest of the body. After this, the rubeolous disease pursued a very

regular course, the eruption disappearing, with some desquamation, at the usual time; but an obstinate and troublesome cough remained, normal resonance of the chest existing on both sides, with loud, mucous râles all over the right lung, unattended with fever. This condition has been gradually ameliorated by the revulsive action of blistering with cantharides, and pustulation by means of croton oil and tart. antim. applied, alternately, to the right interscapular space, posteriorly, and the subclavicular, anteriorly; also, by the administration of 10 grs. of alum, three times a day, and a cough mixture composed of syr. senek., syr. scill., syr. tolu., ol. Jecur. asel. and acid hydrocyan.

The symptoms in the case of Mr. Black's son, were very similar to those of the case which has just been detailed. To them, was superadded muttering delirium, dry and brown tongue, sordes on the teeth and lips. The rubeolous eruption did not manifest itself until the eighth day, and its appearance was followed by an alleviation of all the preceding alarming symptoms.

The treatment of this case was similar to that in the preceding, a blister having been superadded, applied to the nucha, on account of the delirium. The tr. aconit. was used in these two cases, in consequence of the favourable influence on the pulse, which has been lately claimed for it; but it failed to exhibit any such influence.

Desquamation occurred in this last case on the 28th, the attack having commenced on the 15th, and convalescence was not attended by any unpleasant sequelæ.

As is usual with rubeola, the stage of incubation occupied three or four days; the eruption arrived at its climax about the third or fourth day, and declined from this time, not disappearing entirely, in some instances, until the eighth or tenth day from its commencement.

The epidemic disease was developed among the younger members of my own family, attacking first a boy of seven years. The eruption showed itself on his body first, on the fourth day. It did not disappear entirely from the anus and legs until the eighth or tenth day. He became convalescent, and began to go about, as usual, and take his regular meals, when symptoms of indisposition re-appeared, accompanied with fever, anorexia, &c., and in a few hours after, a vesicular eruption exhibited itself on his face, extending rapidly to all parts of his body, and in great profusion. The vesicles were in some places conical, and in others umbilica-

ted, surrounded by a very slight areola without any elevation of base. Those which first appeared, dried in the course of forty-eight hours—others succeeding them in different places, generally distinct, but sometimes confluent; they were filled with a whey-like serum, not becoming purulent.

While this boy was confined to bed with measles, his elder brother, about nine years old, who occupied the same room, complained of feeling unwell, having headache, loss of appetite, &c. In a few hours, an eruption of vesicles occurred on his face, and extended soon to the rest of his body. These vesicles were distinct, somewhat umbilicated, with an areola, and supported on an elevated base. They somewhat resembled varioloid; but I did not consider them worthy of that title.

This vesicular eruption was very much of the same nature as that of the boy first named, which was doubtless varicella.

At this same time, two young negroes who attended in the house, and three others in an out-house on the same premises, showed the same eruption, unattended by fever.

The boy of nine years old (whose eruption was vesicular) was kept in bed two or three days, and purged with citrate of magnesia, and dieted. He then became convalescent, left his bed, and returned to his usual habits. In a day or two, however, he began to lose his appetite, to flush in the face, feel pain in the head, with a dry and hot skin. He was treated to another dose of citrate of magnesia and put to bed, and a warm bath administered at bedtime. On the following morning, the rubeolous eruption made its appearance, accompanied with cough, inflamed eyes, fever, &c. This disease ran its course regularly, and without any unusual symptoms, terminating in rapid convalescence.

Two other still younger children, a boy and girl, occupying the same room with the other cases which have just been detailed, were attacked in the same way, with the rubeolous disease first, followed by the vesicular or varicellous.

The rubeolous disease in the little girl's case was unusually severe, being attended with a very profuse eruption; on the second day of which her pulse rose to 160 in the minute—respiration 48, accompanied with alarming convulsive jerkings of the head and extremities, and harrassing cough. She was subjected to hot mustard pediluvia, mustard poultices to extremities and chest, dry cupping to interscapular region, alterative doses of calomel and ipecac, flaxseed enemata. She recovered perfectly.



The treatment which I have employed in this disease, has consisted of mild purging with castor oil or citrate of magnesia, diluent drinks of flaxseed infusion, arrow-root, gum-water, mustard pediluvia, mustard or pepper poultices to extremities, chest, abdomen and throat; hot general baths, when the eruption is backward in making its appearance; occasionally spts. minder., to allay febrile symptoms. After the decline of fever, and during the decline of the eruption, pulv. Dover, to check diarrhœa (to which there is a very great tendency) and to procure rest; flaxseed enemata, to allay tenesmus.

For the purpose of removing cough and bronchitis, which is apt to continue after the disappearance of the fever and eruption, I prescribe mixtures composed of syr. senek., syr. scill., syr. ipecac., syr. tolu, and sometimes, gum ammon. and aq. laur. ceras., or acid hydrocyan., elix. paregor. and Dover. pulv.

Where there is exhibited any tendency to pneumonia, or cerebral disease, alterative doses of calomel, combined with ipecac. or pulv. Dover. sometimes vin. antim. and blisters. I have used mur. ammon. where the bronchial affection proves obstinate, but I do not consider it as efficacious as alum.

Usually, measles is an exceedingly mild and manageable disease with us; so much so, that very many persons consider it entirely unnecessary to send for a physician. The popular notion is, that it is only necessary to keep the patient warm, and give saffron tea to bring out the eruption. Some, who are more economically inclined, give sheep or goat dung tea, instead of saffron, for the same purpose. I am inclined to consider one quite as good as the other. The eruption is much more speedily and effectually brought out by giving cool, demulcent drinks internally, combined with revulsive stimulating poultices, and warm baths to the surface.

The epidemic of which we are speaking, has proved the most serious and severe disease, of this character, which I have ever encountered. It has been attended with unusual mortality, in consequence, mainly, of the grave complications which it has involved. The most frequent of these are pneumonia and laryngitis; in some cases, tendency to cerebral disease.

I attended the son of a South Carolina planter, who came to Savannah to put his children to school. His eldest son, 15 years of age, had ridden on horse-back from home—about a day's journey. He sickened on the day of his arrival in Savannah, having

fever and cough. His father, without the advice of a physician, gave him calomel, in broken doses, to the amount of 12 grains, following it with a dose of castor oil. The rubeolous eruption showed itself on his face, full and confluent, but sparingly on the extremities and trunk. The larynx became, rapidly, deeply involved, cough and respiration croupy, with pain and sense of suffocation. The eruption assumed a livid tint, typhoid symptoms supervened, and he died on the fourth day from the commencement of the eruptive stage.

The result of this case might have been different had my directions been followed in the application of revulsives to the surface. A general warm bath was not administered, for the want of the proper conveniences; and although mustard poultices were, subsequently, freely applied, the eruption continued scant, and pale or livid on the surface. An attempt to vomit him with ipecac. failed (the drug passing off by the bowels); a blister was applied to top of sternum; alterative doses of calomel and ipecac. were exhibited; and he was stimulated with turpentine, wine, brandy, and carb. ammonia, without avail.

My friend, Dr. Bulloch, saw the case with me. He considered it the worst case of measles which he had ever seen, and expressed the belief, that in cases of this description, proper aeration of the blood is prevented, and a state of asphyxia is induced by the extension of the inflammatory irritation throughout the mucous membrane lining the bronchial tubes and vesicles.

I attended a child of Mr. A. A. Solomons, druggist, aged two years. There is a strong predisposition in the children of this family to cerebral disease. This child was attacked with fever, cough, anorexia, and great irritability of temper. It was purged with calomel and castor oil, and leeches behind the ears. The febrile symptoms being thus moderated, and believing that they were the prodromes of measles, an active and persevering revulsive treatment by warm bathing and mustard poultices, was instituted, and followed by the rubeolous eruption on the third or fourth day. The eruptive stage passed off with regularity—slight cough and frequency of respiration continuing—but conjoined with excessive irritability of temper, a dull and sleepy appearance of the eye and perfect aversion to food and nourishment of every description.

In consideration of the family predisposition to cerebral affec-

tions, these last mentioned symptoms were calculated to create uneasiness. My friend, Dr. J. B. Read, was called in consultation, and we determined to watch the case very closely, and pursue a semi-expectant and alterative course of treatment. Although there remained cough and some abnormal frequency of respiration, there were presented no physical signs of pneumonia or other thoracic disease. The most prominent symptoms indicated cerebral irritation. But as the child had been considerably reduced by the rubeolous attack, it was possible that its present condition might be only hydrocephaloid, the effect of debility, and not hyperexcitement. It was enjoined, therefore, upon its nurses, to persevere in endeavoring to introduce as much nutriment into its stomach as possible. A pursuance of this course for a few days was productive of good effects, and the hydrocephaloid symptoms disappeared entirely. The simple uncomplicated cases of the epidemic, as is usual, terminated favorably, with very few exceptions, requiring very little medical treatment. The various complications which have been spoken of, required to be met with the same remedial means as are found effectual in their treatment, when uncombined with measles or other morbid conditions.

The co-existence of measles with some of the other exanthemata, is alluded to by authors. Measles and scarlatina have been observed mixed up together in the same case. Small-pox has been seen to succeed measles, and measles small-pox. The same with the vaccine disease: and Gregory states, that "one of the most familiar modifications is, an abundant crop of miliary vesicles on the anus and trunk, filled with transparent lymph, and of such size and distinctness as to create the suspicion of the disease being small-pox." But I do not find in any author, exactly such a complication alluded to, as that which I have described as occurring in my family.

In one of my children, and in several little Negroes, the vesicular eruption, resembling most nearly varicella, made its appearance first, and was succeeded, several days after its cessation, by measles. In three other cases, (whites occupying the same room) measles appeared first, ran its course, convalescence succeeded, and then a re-development of morbid phenomena, terminating in the vesicular affection. Desquamation occurred in some of the cases of measles; but these were the exceptions—the majority exhibiting no desquamation.



I have heard it suggested that in cases where desquamation occurs, the protection against a second attack may be made more perfect. I am not disposed to admit this, inasmuch as second attacks are rare, and the cases of desquamation are almost equally rare.

The epidemic still lingers in our city, and will probably continue until the subjects are exhausted. It is gradually extending to the country and plantations. That it is propagated by contagion in many instances cannot be doubted. It made its first appearance on Ossabaw island, which is on the sea coast, 20 or 30 miles from Savannah, on a plantation at the south end of the island, immediately after the return of a negro boy from Savannah, in whom the disease was developed. After the disease had run its course with him, nine other cases broke out simultaneously on the same plantation—there being no case on any other part of the island at that time, nor had there been previously.

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*Diseases of the Female Urethra*, (Read before the Suffolk District Medical Society, Feb. 23, 1856.) By WALTER CHANNING, M. D.

These diseases are of the meatus, or are just within it, or occupy more or less of its lining tissue. Those which are at or nearest the meatus may arise by a narrow foot-stalk, or may have a broad base. They have, sometimes, many origins, or proceed as vegetations of various length, from a single base, or may have independent origins. At times they are acuminate, at others rounded, with narrow, or almost filiform foot-stalks. When of broader origin they may be oblong, or circular. They may not be much elevated, but lie broad and flattish upon, or within, the meatus. In one case, the tumor, if such it may be called, arose thin and broad, and protruded, fan shaped, beyond the external labia.

In structure these growths are very delicate, seeming to be a mere mass of vessels enclosed within the finest tissue. This it is which accounts for their color. This is the brightest ruby red. We rarely meet with any structure of which the color is more distinctive than it is in this disease. It explains the hemorrhage which has been met with after their excision. In some cases this is as unmanageable as in any surgical operation which has hemorrhage as a result. We are not always aware of the amount, as the flow may be towards, and into, the bladder. Subsequent micturition shows the amount.

Another sign is the sensibility of these growths. It is emphatically exquisite. The slightest touch produces intense suffering.

Micturition is dreaded. Walking or sitting brings with it severe pain, so that the patient is obliged to keep, as much as possible, at rest. This has been especially annoying to women who live by work. At times they must abandon all active employment. It seems hardly possible that so small a disease should produce so much annoyance. In those instances in which the disease extends much, especially to, or beyond the labia, there may be a foetid acrid discharge, which irritates and inflames the surfaces to which it is applied, or upon which it accumulates.

In some cases the meatus is thickened; sometimes half round, at others in two opposite parts of its circumference, forming distinct lips, with a linear opening. In such the meatus may be patulous, or easily opened, showing a morbidly red surface of the urethra within. In these instances there is less suffering than the preceding form of the disease has accompanying it, but it is quite enough to trouble the patient and to act as a fret upon the mind, producing depression of spirits, and if it have existed a long time without being diagnosed, and has been treated as is common dysuria, there is a hopelessness of recovery which does not promote convalescence. This last is marked by paroxysmal attacks of suffering, the intervals of which may become longer and longer until they disappear.

Another form of structural urethral disease is found in the urethra itself. The meatus is well, but patulous. There is no outgrowth. There is nothing unusual in it except its being very open, or easily opened. Within is the ruby red color. There is one lesion in it which has rarely been met with by me. This consists of cracks or fissures, appearing as lines only, and often only attended with pain during micturition.

Of the subjects of these diseases, as to age, it has been met with from 12 or 13, to between 40 and 50. Sedentary persons, as dress makers, shop tenders and domestics have furnished most cases. The most healthful in appearance, and in fact, have been its subjects, and the suffering has been equal in all its subjects.

One fact in the history of these diseases deserves special notice, and which has been adverted to. This is the accompanying condition of the bladder. It gets to be very irritable. It bears but little urine without distinct complaint. The patient's occupation or situation may prevent a prompt attention to the call. The suffering is great; but worse, the bladder becomes seriously impaired in its functions, and may always trouble the patient. In this form of the disease the diagnosis is made with much difficulty, so that the effect of a disease becomes the leading object of regard, while the disease itself lies unnoticed and unknown. Symptoms of grave renal trouble may be developed at length, and a condition of helpless invalidism may be the result.

*Diagnosis.*—This is not difficult if its means are used. These are mainly inspection of the part. This may be made sometimes

with the speculum with a fenestra or window in its tube. If the disease be beyond vision, then the catheter very slowly introduced, or a bougie, may point it out. Chemical examination of the urine will separate urethral from vesical and renal maladies. Symptoms, and appearances, as above given, will of course form an important part of the means of diagnosis.

CASE I.—This occurred many years ago, in a domestic apparently in perfect health, about 18 years of age. I saw her with my friend, Dr. Putnam. The local symptoms, so grave in this case as to make it absolutely necessary for the patient to leave her place, led Dr. P. to ask for an examination, when vaginal explorations were rare. He discovered a tumor, projecting from the urethra, small in size, with a broad base, ruby red color, and of exquisite sensibility. Dr. Putnam removed the tumor by excision, immediately afterwards applying the nitrate of silver. The recovery was speedy and perfect.

CASE II.—This case was seen by me with my friend, Dr. Bowditch, some years ago. A domestic, aged about 15 years. No cause was assigned for the disease. It had existed for some time, and was the smallest in size of any met with. It was little more than filiform. The suffering was out of all proportion to the size. This case was treated with the nitrate only, and permanent recovery followed.

CASE III.—Miss —, aged about 30, dress maker, applied to me on account of very severe, or distressing dysuria. She had great pain from walking, or any exertion, referred to fore part of the front passage. She had suffered from it for a long time without being able to make up her mind to apply for relief. She was asked if in her occupation she had not felt obliged to retain her water when the calls to pass it were very urgent. She said yes. This question is always asked by me in like complaints, and it is almost always answered in the affirmative. The largest class of patients who consult me for these complaints, complicated as they often are with obstinate costiveness, and various uterine maladies,—the largest number of these are folders, and stitchers of books, milliners, dress makers, shop tenders, slop-shop sewers—the most sedentary of employments, and which to be made at all remunerative must be steadily pursued for many hours in succession. So true is this that the noon meal is carried to the rooms in which they have employment, so that from 12 to 15 hours may be passed without the least exercise. It is in these that the calls of nature are unheeded and the surest foundations are laid for incurable invalidism. Dr. Franklin, I think, died of stone, and traced his disease to his confinement to the printing press in early life, and his neglect of the functional means of health.

Upon examination of Miss —'s case, a tumor was found projecting from the urethra of a larger size than had been met with by me before in this situation, and having the characters above described.



She consented to have it removed, and this was done next day, Dr. Putnam assisting me. The base was broad, and it was impossible to remove the whole of it without a hazard of hemorrhage which it might be found difficult to check. The nitrate was applied to the wound. Next day the patient was found very comfortable. As a portion of the disease remained, the nitrate was applied once or twice a week, until it was entirely removed.

Between one and two years after, the disease returned. This was after case IV., which follows. The tumor was about the size of the first, and the same symptoms accompanied it. Before removing it, ice was applied until sensibility was entirely removed, and with the best result. There was no feeling of the excision of the tumor, nor from the application of the caustic. After a few subsequent applications of the nitrate no appearance of the disease remained.

CASE IV.—This was a school girl of about 13. Menstruation had not occurred. She was unusually tall and large for her age. Health perfect, robust. There was the developement of more years. Her mother, an intelligent woman, was uncertain of the time of the occurrence of the disease. There had been, for some time, smarting and difficulty in micturition, with much chafing of the external labia and a foetid discharge. At length a thin, bright, flat substance, with a scalloped edge, was seen projecting between the labia, which was followed by increased difficulty, and walking became very painful. She was taken from school. Dr. Putnam saw this case with me. It was as described by Mrs. ——. The slightest touch produced intolerable pain and a sudden spring of the patient, which stopped the examination at once. It was soon found that nothing could be done without etherization, and next day this was tried. Great difficulty was met with in overcoming the power of the patient, and when the fullest effects of ether were apparent in the general system, the local sensibility remained so perfect as to make the child wholly unmanageable. Chloroform was next used and freely, but with no effect. It occurred to me, in the failure of these means of quiet, to try ice. The trial was made and was perfectly successful. Not the least uneasiness was betrayed when the diseased mass was freely handled, when it was embraced by the hooked forceps, nor when it was cut off by the scissors, nor afterwards when the nitrate was freely applied to the cut base, which was deep within the meatus.

Next day patient was found comfortable. Inquiry was made if hemorrhage had occurred. There had been no external bleeding, but with urine which had recently passed, a large quantity of coagulated and liquid blood had come away. There was no return of this, and recovery was rapid. This is the only case within my observation of these diseases in which hemorrhage has followed the excision of these outgrowths. It is worth remembering. If the symptoms of this accident occur, and there be no external flowing,

an examination of the urethra, and the use of the catheter, might discover the cause, and plugging might prevent farther trouble. As for the most part the disease has its seat near the meatus, it could not be difficult to apply here the means to check it, and direct or mechanical ones must be more sure of the effect than are chemical ones.

CASE V.—Mrs. —, a widow, about 40, called on me on account of long-continued pain in the back and hips, sense of weight and dragging, leucorrhœa, and disturbed menstruation. She had also dysuria, internal hemorrhoids, which much embarrassed defecation, and had almost cartilaginous and numerous vegetations surrounding the anus. Her general health was wretched. Emaciation great, and upon the whole she was as severe a sufferer as is often met with. Examined by the speculum, a tumor was seen projecting beyond the os uteri, of the size of a small walnut. It was soft, easily bleeding, and insensible. Quite a large vegetation was found at the meatus urinarius. It had the usual color of such growths, but was the least tender of any before seen by me.

Treatment was first directed to the uterine outgrowth. This was too soft for the ligature or forceps. Caustic was freely and frequently applied. The good effects were soon obvious in the entire disappearance of the disease. The os uteri closed and presented the linear diameter and size of health. The same means were successfully used for the disease of the meatus. The caustic gave pain, but the free use of cold water soon removed it. Much more time passed before the cure, than was required for the removal of the uterine disease. The hemorrhoids were removed by ligature, the tumors being forced out of the bowel by the patient for the use of the ligature. After those had been removed which were pendulous enough to be tried, a tumor with a broad base remained, and kept up the old irritation. To this caustic was applied by the rectal speculum having a lateral opening. The external vegetations were removed by the scissors, to the bases of which caustic was applied immediately after the excisions. After several months' treatment Mrs. — recovered, and is now in good health. She has regained flesh, and uses exercise freely without any of its former accompaniments. This case was complicated with heart disease. On ascending heights, distressing palpitation with dyspnoea were experienced, accompanied by rigors in which the teeth would chatter as in severe paroxysms of intermittent fever. The skin became cold and livid. There were no signs discovered of organic cardiac trouble, and its imitations have gradually diminished as remote local diseases have disappeared.

CASE VI.—Mrs. —, aged about 30. In this case the whole urinary apparatus was diseased, and had been so in various degrees for a long time. There was an outgrowth from the urethra involving the meatus. This was exquisitely tender, hardly tolerating the touch—constant dysuria, with frequent calls to pass water. Is con-

stantly in bed, the least movement producing increased suffering. Constant uneasiness in the part diseased, with paroxysmal exaggerations which it was not easy to remove or diminish. The catheter was used and the whole extent of the urethra was found as tender as was its meatus. The urine was rendered in various conditions. At times it was bloody. Liquid and coagulated blood was so freely passed that at times it seemed to make the principal amount of what came from the bladder. Sometimes it was purulent, and in no case have I seen so much pus in the urine as in this. At other times the precipitate was flocculent, branny, reddish, or quite pale. At others albuminous. Along the back and in the renal places there was much tenderness.

The treatment of this case was designed to meet obvious indications. The constitutional symptoms were febrile, or such as very grave local disorder commonly induces. There was heat, quick pulse, no appetite, prostration. Local bleeding, counter-irritation, alteratives, narcotics and subnarcotics, diosma, tinct. fer. mur., demulcents, external applications in their endless variety—these were among the means employed. She was etherized and the urethral outgrowth removed by excision. The nitrate was afterwards used to check hemorrhage.

At times were signs of improvement and recovery. The vesical hemorrhage, if it were vesical, would cease. And so would it be with pus, which replaced hemorrhage, and with other deposits. The urethra would seem to be recovering, and then without known cause, the patient not having left her bed, all the symptoms would in various order show themselves. At length, when much relieved, Mrs. ———determined to go home. This she did, her husband coming to go with her. Her travel was more than one hundred miles and was without accident, at least I have not heard that it produced any. I could not learn what had been the precise relation of symptoms in this case. It had lasted so long that the order of their occurrence was forgotten, if it had ever been observed. Thus, was the urethral difficulty the first in the order of symptoms, and the vesical and renal, effects of this, either by contiguous or continuous sympathy? Or were these last first in the order of diseases or symptoms? The outgrowth was cut away because it was a source of exquisite suffering during micturition, and during the premonitory actions of the bladder which make up the call to pass urine.

Sulphuric ether was used before operating. Its effects were unlike any I have observed during or after inhaling ether. The respiration ceased, the pulse continuing. There was the same appearance of entire repose, pallor and insensibility, as has been observed in fatal cases from chloroform. Respiration was at length produced, and with gradually shortened intervals was re-established. She was cautioned not to use ether again. But in the night, during a paroxysm of intense agony, she insisted on breathing it again. Her attendant yielded. The same result followed as before, and



from which she recovered after the use of the same means. This is the only case in which trouble has followed the use of ether in a very large observation of its agencies by myself and by many others. It was doubtless owing to conditions produced by long-continued suffering, and though apparently alarming, was perfectly recovered from.

CASE VII.—Mrs. —, about 30. This, with other cases, was complicated with uterine functional disease with displacement. The dysuria was of long standing, and was independent of any disease of the meatus. This last was patulous and soft. Within the urethral tissue was redder than natural, and presented a distinct oblique fissure. This is the only case in which I have met with this affection in this organ. It was treated with a solution of nit. argent. applied with a brush. It is under treatment.

CASE VIII.—Mrs. — has one child; called on me on account of displacement of long standing, the os uteri being turned strongly towards, and resting against, the hollow of the sacrum. With the symptoms of such dislocation was very troublesome dysuria. As this last might be owing to the pressure of the fundus upon the bladder, attention was directed to the womb. It was replaced and Hodge's lever pessary introduced. The relief of symptoms of displacement was perfect. After a time they returned. Examination showed the pessary out of place. It was adjusted and worn for some weeks, but getting again displaced, it was removed, and Meigs's ring pessary substituted. This answered perfectly well. It was worn four or five months, and as all the symptoms for which it was used had disappeared, it was removed. It had not at all been injured by this long use. Dysuria continued, and became a very troublesome disease. The urethra was examined. The lips, or edge, were found much swollen, but not at all reddened. Upon opening the meatus, a swelling with a broad base was detected, bright red, and very tender, and beyond, the lining membrane had the same color. At first the solid nitrate was applied. Its good effects were manifested after a few applications. The solution was now substituted, with entire relief of the dysuria. There was an opaque mucous discharge from the urethra, which has been met with in other cases, but this has nearly disappeared. Mrs. — can now take long walks without inconvenience, and considers herself well. Cases enough have been given to illustrate the general history of the diseases under consideration.

*Remarks.*—It may be asked if there were not a specific cause of these urethral lesions. The answer is distinctly in the negative. The ages of some of the patients and the social position of others, and direct inquiries wherever suspicions arose of causes, have satisfied me that there was no reason for suspecting or believing in the action of such a cause. The treatment was in no case specific. Strictly local remedies were relied on. In one case only am I sure

that the disease re-appeared, and since its second removal it has not returned.

Few diseases would seem to present greater difficulties in their diagnosis, and few are more painful and persistent where a correct diagnosis is not made. The difficulty lies wholly in not using the only sure means of diagnosis; for when an examination of the diseased part is made, the discovery of the nature of the malady is at once made. The sight and the touch should be both employed.

Of the treatment there is but little to be added, and that cautionary. Hemorrhage has been alluded to. If my memory serve, one case is reported which was disastrous in its results from this cause.

There has been but one case in my practice, in which there was bleeding after the application of caustic, and that was internal into the bladder. This should be borne in mind, as we may have the symptoms of large hæmorrhage without external flow. Should hæmorrhage be excessive or continue, then caustic, pressure by a bougie, or other means, may be employed. Grave peritonitis, we are told, has followed slight operations on the vagina. There is a case in mind, in my own practice, in which very severe pain and soreness in the abdomen followed the injection of the cervix uteri with a solution of nit. argent. No case is remembered in which operations in the meatus, or urethra, have led to such results.

The first case in which ice was used to destroy sensibility occurred some years since, and I am not aware that such an employment of it had been made before, or that I had met with the suggestion, or the authority of its actual use. Quite early in my professional life, an aged physician, now long dead, said to me that he had used ice, in the form of icicles, in cases of sore throat in which the tonsils were much swollen, and the pain was great, and that relief had followed, and so nearly to the application, that he could not but regard it as its consequence. This conversation may have unconsciously suggested the use of ice in the cases reported. It was perfectly successful. Dr. Arnott, of England, and physicians and surgeons in America, have more recently recommended and employed ice previous to surgical operations to prevent pain, and I think by Dr. Arnott to make other anæsthetics unnecessary. In my cases the effect was excellent. Under ether or chloroform the patient will sometimes start at the first touch of the knife, though apparently under their fullest operation. This has been met with by me too often to doubt it. In Case IV. it made the operation utterly impossible. Ice at once removed all pain. In a recent case, in which an abscess of the abdomen was to be opened, ether was used until its fullest effects were manifest. The first touch of the knife caused so much starting that it was only by use of force to restrain the patient that the operation could be completed. When Mr. — recovered his consciousness, he had not the least memory of having resisted what had been attempted.

After this paper was read, a request was made that the fellows

present would communicate such cases of female urethral disease as might have fallen under their observation. From one, three cases were reported, and two from another. In one of the last, no structural disease had been discovered, though carefully looked for. The pain was confined to the urethra, and was represented as very severe. Many methods of treatment had been used. Some months of relief were experienced, but some threatenings of return of the symptoms had been recently manifested. Another fellow reported very interesting cases without discovered urethral lesion, though most carefully searched for, in which the symptoms reported in the cases in this paper were present in severe form, and in which injections of narcotics and sedatives into the urethra had been remedial.—[*Boston Med. and Surg. Journal*.

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*Whooping Cough, its History, Nature, and Successful Treatment.*  
By LAURENCE TURNBULL, M.D., &c.

This disease has been to me one of much thought and considerable personal interest, from having had four of my children attacked with it in its most aggravated form. My attention was also particularly called to it during the months of May and June, 1854, when the malady prevailed to a considerable extent in our city; cases of it have also continued to occur up to the present month, July, 1855.

In referring to the works of Hippocrates, (Sydenham Society's Edit. in two vols., London, 1849,) I find no description of whooping cough, neither is there any account of it in the Seven Books of Paulus Ægineta,\* so that I would infer that the Greeks, Romans and Arabians were not acquainted with it as a distinct disease.

Dr. Willis was the first medical writer who accurately described whooping or chin cough, his work being published in 1682, (in two vols.)† It was not until the present century, however, that this disease was fully investigated and made known to the medical public, which was chiefly done by the labors of Rosen, Cullen, Schæfer, Hufeland, Mathai, John, Authenrieth, Watt of Glasgow, and Albers of Bremen. It is stated by Rosen, that it passed from the East Indies and Africa into Europe.

*First stage.*—The first stage of whooping cough has no distinct and prominent symptoms by which it can be distinguished from ordinary catarrh, or bronchitis, except, perhaps, a slight difference in the voice and cough which sounds louder and shriller; the ex-

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\* The Seven Books of Paulus Ægineta, translated from the Greek, by Francis Adams, LL. D., in three vols., London, printed for the Sydenham Society, 1844.

† "Tussis puerorum convulsiva, sue suffocativa et nostro idiomate *chin-cough* vulgo dicta." (*Opera Omnia*, Amst. 1682, vol. ii. p. 169.)



pectoration is usually limpid, but in some instances I have noticed it opaque, yellow, and even greenish.

This period may last from five days to as many weeks. Lombard states that in an epidemic which occurred at Geneva, it lasted from one month to six weeks; when the whoop is going to occur, it is usually noticed in the second or third week, but I have had several cases where the cough was present without the whoop.

This absence of the whoop is often very unfortunate, for children may in this way propagate the disease, and cause whole families and even schools to be attacked. This fact was proven in the case of my son, aged seven years; he sat in school by the side of a little boy who had a cough, which was very sonorous and painful to listen to, but the anxiety of the teacher was much relieved by being informed that his physician did not consider it whooping cough; subsequently the youngest child of this family was attacked by the disease and whooped, and the boy was then kept from school, but too late to save the other members of his class, ten of whom took the disease, so that the school was nearly broken up; my son communicated it to his three sisters, who all suffered more severely from it than he did.

I therefore think that children should not be allowed to mix with their companions when suffering from a cough of this character, if the disease prevail in the locality.

*Second stage.*—The second or spasmodic state of this malady, is easily known, by the peculiar sound and suffocating character of the cough. In this stage, almost every organ is irritated, and it even produces discharges of blood from the nose and mouth. The expression of the countenance is most distressing. When this stage is at its height, the child seems to know by some inward sensation that the attack is coming on, and it either cries or lays hold of some object by which it can support itself until the paroxysm is over. The face and neck become swollen, and in some instances remain so, and the child, at the termination of a fit of coughing, either discharges some thick tenacious ropy mucous, or evacuates the entire contents of the stomach.

The least mental excitement, either of joy or sorrow, will produce an attack, and the number varies with the severity of the disease. The paroxysms last from one-fourth to three-fourths of a minute.

The average duration of whooping cough is from six to eight weeks if not checked, but in many instances it lasts as many months; second attacks are rare, and yet they do occur. Whooping cough prevailed in this city with measles, in May and June, 1854, followed in October and November by chicken pox, and in January, 1855, by scarlet fever, with sporadic cases of catarrh and croup, showing a connection or relation one with another, so that the same causes may give rise during an epidemic to simple catarrh, croup, whooping cough, or even measles.

The complications of whooping cough I cannot enter into, but the chief of them are croup, bronchitis, pneumonia, pleurisy and diseases of the brain and cavity of the abdomen, which are to be recognized by their characteristic symptoms.

According to Billard, post-mortem examinations have not revealed anything uniform in this disease, except bronchial catarrh in its various stages.

Sydenham imputed the disease to a subtle and irritating vapor in the blood. Hufeland considers that the eighth pair of nerves is diseased, and is the cause of the double irritation of the bronchia and stomach. According to M. Guersent (*Dict. de Méd.*) whooping cough is a catarrhal affection, seated in the trachea and bronchi, consisting of a specific inflammation, accompanied with spasm of the trachea and glottis. Dr. Watt, of Glasgow, considers the disease to be inflammatory and seated in the bronchi. Albers, of Bremen, considers whooping cough to be an affection of the nerves of the thorax, with which bronchitis is frequently complicated. Laënnec regards it as a variety of pulmonary catarrh, and from the convulsive character of the cough he calls it convulsive catarrh.

Dr. Webster (*Med. and Phys. Jour.*) is of opinion that the symptoms, when closely viewed, suggest the impression that whooping cough depends upon inflammatory irritation of the brain or its membranes. This is the opinion held by Dr. Copland, and very many distinguished men of the present day, but to my mind it is not satisfactory. The whooping cough, in its first stage, is certainly of an inflammatory character, chiefly affecting the lining membrane of the air passages, but this is of a specific nature. In the second stage there is no evidence of inflammation indicated either by the pulse, skin, or any other organ, but there is a powerful irritation of the laryngeal constrictor, and bronchial muscles and nerves, producing a cough which occurs rapidly many times so that a single inspiration is followed by five or six successive expirations constituting paroxysms of coughing (*tussis accessus*), accompanied with redness of the face, watery eyes, headache, *tinnitus aurium*, fulness of the cervical veins, retching and sometimes vomiting.

By some writers it has been considered that this disease was produced by a peculiar miasma, acting chiefly on the nerves, and is also ascribed to the presence of minute insects in the air (Boehme—Linnaeus,) or, according to Prof. J. K. Mitchell, its epidemic origin may be a peculiar fungus; "the spores of these plants are not only numerous, minute, and indefinitely diffused, but, like the animal, all have the power of penetrating into and growing upon the most interior tissues of the human body," passing into the systems of those exposed to its influence by the respiratory organs or stomach, producing the irritation of the mucous membrane of the air passages. "Introduced into the body through the stomach, or by the skin or lungs, cryptogamous poisons are known to pro-

duce diseases of a febrile character, intermittent, remittent and continued—and even the disease of the mucous membrane, termed aphthæ, arises from the presence of minute fungi.”\*

Dr. M. has not made this application of his doctrine to this particular disease, yet I do not see any good reason why it should not be so applied. According to Dr. Spengler, of Ellville, epidemic diseases depend on the presence or absence of ozone. He states that in the village of Roggendorf, in Mecklenburgh, towards the close of 1846, when slight catarrhal affections became prevalent, but slight traces of ozone were to be detected in the air. With the opening of the following year, however, these catarrhal affections assumed the severest forms of tracheal and bronchial disease, and whooping cough became common both among children and adults; then reagents detected a great increase of ozone in the atmosphere.”†

*Prognosis.*—The prognosis in uncomplicated whooping cough is very favorable, and is unfavorable only in proportion to the dangerous nature of its complications and the age of the child; the best season for a favorable termination is spring or summer.

*The modes of Propagation.*—The disease may occur epidemically or sporadically, and it possesses infectious properties. It is propagated through a family from one to another; they are not all apt to be attacked at the same time, and by removal to a distance a child may escape. Dr. Cullen believed that it disappeared in from four to six weeks, but this has not been proved by subsequent observation. Children who have suffered from this disease, should not be sent to school or play with their companions for at least two months.

*Treatment.*—There are but two classes of symptoms to be combated in this disease when no complication exists. The inflammation must be reduced by depletion, expectorants and refrigerants. In the second class of symptoms, the chief object is to diminish the abundant secretion and allay the great irritability of the laryngeal constrictor, and bronchial muscles and nerves.

The means to accomplish this, in my hands, have been the abstraction of blood; the application of a few cups or leeches to the nape of the neck or under the clavicle, with counter irritation, by means of sinapisms and blisters, which will soon allay the congestion of the brain or lungs. To diminish the febrile action small doses of tartar emetic, combined with Dover's powder or prepared chalk, with the free use of syrup of ipecacuanha as an emetic may be given; these will lessen the bronchial inflammation, and remedy the often disordered state of the stomach and bowels.

During the whole stage of the disease, demulcent drinks should be freely administered, such as flax seed tea, barley or rice water. When fully satisfied that the inflammation has been subdued,

\* Lond. Med. Gaz. Henlie's Zeitschrift, vol. vii. p. 1.

† On the Cryptogamous Origin of Malaria and Epidemic Fevers. J. K. Mitchell, M.D. Philada. 1849.



indicated by a slower pulse, less heat of skin and no active congestion of the brain or lungs, I have then followed the treatment with belladonna, and my success with this remedy has been most gratifying. Before administering it I tried, in vain, the free use of cochineal in combination with alkalies, assafoetida, opium, alum, hydrocyanic acid, &c. In every instance in which the system was fully brought under the influence of the belladonna, indicated by dilatation of the pupil with confused vision and reddened skin, I was enabled to check the annoying cough and whoop of thirteen children during the month of May and June, 1854, and seven cases since that time, making twenty cases in all, eight males and twelve females; the youngest was nine months and the eldest ten years.

The following was the method followed: The system being prepared by reducing the inflammation by the means before spoken of, obtain, if possible, English extract of belladonna, fresh and good; let the extract be triturated with water or simple syrup; if it is to be kept for some time, add a small quantity of alcohol. The dose for a child three months old is the sixteenth of a grain every three hours, to a child one year one-eighth of a grain, and so to other ages in proportion.

Inform the parent or nurse of the change it will produce upon the eye, also that it may redden the skin. When full dilatation of the pupil is brought about, the medicine is to be intermitted until it has gone off again; the belladonna is to be administered in slightly increasing doses, so as to keep the child under its influence for several days or until the paroxysms are checked, which will usually occur towards the sixth or eighth day of the second stage.

In the twenty cases cured by the use of the belladonna the cough and whoop returned in a few cases on exposure to cold, or in disagreeable, windy weather; but by combining the extract with syrup of ipecacuanha a few doses soon checked the cough and whoop; in only one case out of this number was it complicated with inflammation of the lungs and this case recovered.

The average duration of my twenty cases was ten days after the whoop had commenced, when the case was free from complications, which shows the great advantage of this treatment. The ordinary duration of the disease, when treated in the usual manner, is from  $1\frac{1}{2}$  to  $3\frac{1}{2}$  months; even by prussic acid, or the application of nitrate of silver, the average given is from two to three weeks. It is stated by Dr. Gibb that with the use of nitric acid, the average duration was only six or seven days. Several physicians who have used this remedy, however, do not find such favorable results from its use.

I have added to my communication some extracts from the experience of a few distinguished medical men on the use of this important agent, belladonna.

This remedy was used in whooping cough about the year 1783,

by Dr. Buckhaave, of Copenhagen, who gave the powdered root in doses of two grains, morning and evening, to a child of five or six years of age. The cure, it is stated, was generally accomplished in from seven to fourteen days.\*

Dr. Miquel. (of Neuerhaus,) says the belladonna is a remedy upon which he can always depend in this disease. In the course of many epidemics which he has observed during fifteen years, he has constantly cured the cough in eight days.†

Dr. Samuel Jackson, of this city, late of Northumberland, who although he was not the first to employ the belladonna, yet by his valuable publication in 1834 brought its virtues prominently before the medical public, has continued its use for twenty years, and his confidence in its powers to arrest the paroxysm and cure the second stage of whooping cough in the great majority of cases is undiminished.

Dr. Hiram Corson, formerly President of the Medical Society of the State of Pennsylvania, a distinguished practitioner of Montgomery county, Pa., in a paper on the efficacy of belladonna as a remedy in Pertussis, published in the *Amer. Jour. of Med. Science*, for Oct. 1852, makes the following observations: "My experience in pertussis had satisfied me that of all the remedies in common use, those recommended by writers upon diseases of children are almost useless. Children affected in the winter continued to cough and strangle and suffer for many weeks with scarcely a perceptible amendment. It was painful to visit and mortifying to prescribe for those afflicted with this malady."

He commenced the use of belladonna in four cases, and in one week they were all well. His method of using it was to begin with the sixteenth of a grain to children under one year every two hours, and increasing a little every day until full dilatation of the pupil occurred, the skin became flushed and vision confused; this he accomplished by dissolving eight grains of the extract in an ounce of water, nine drops of which contained the eighth of a grain.

In an epidemic in 1840, he used the belladonna in hundreds of cases with great relief in nearly all. By giving it in small doses at first, the fears of the patients were allayed. In 1847-8, he also prescribed it in numerous cases with much success. He concludes his paper in these words: "During the last seventeen years, I have given the extract of belladonna to hundreds of patients from two months to fifty years of age, and am firmly convinced that it has a greater control over whooping cough, than any other remedy in common use. That while, in a few cases, the system did not seem susceptible to its action in the doses I have prescribed, yet

\* Dr. Duncan's Commentaries for 1793, and Dr. Gibb on Pertussis, p. 282, 1854.

† Vol. vii. *Amer. Jour. Med. Sciences*, p. 524, from *Archives Générales*, August, 1830.

in nearly all the disease yielded quickly. It is a safe and efficient remedy for pertussis in children of any age.

Dr. Eberle, in his *Treatise on the Diseases of Children*, second edition, remarks "that the belladonna has been highly celebrated, and is without doubt, by far, the best article of the kind we possess. My own experience leads me to testify confidently on this point. I have prescribed it within the last six years, (1834), in perhaps twenty cases, and in the majority of them with evident advantage." Professor Borda, he remarks, was the first he believed who used it as a remedy, and his belief in its efficacy is almost unlimited.

Hufeland and Alibert are almost equally decided in their praise of the virtues of this article.

The mortality from this disease in our city in 1850 was 114; 1852, 168; and for 1853, was 64. In 1853, in the district of Richmond, it occurred as an epidemic. In severe cases, Dr. Janvier used the belladonna with the best results. "It mitigates the paroxysms better than any other sedative."\*

Dr. Condie remarks in his work on diseases of children, that the narcotic from which the greatest amount of benefit is to be anticipated in this disease, is unquestionably the belladonna; it has been very extensively employed, and the evidence in its favor is strong and conclusive, (by Kahleiss, Janin, Hufeland, Wideman, Raisin, Guibert, Alibert, Shafer, Laënnec, Müller, Blache, Maunsell and Lombard).

He further remarks that he had given the belladonna a very fair trial, and has, in many cases, been pleased with the prompt and decided relief produced by it, "while in other instances it appeared to exert no influence whatever."

I think that this last remark may be often accounted for by the bad character of the belladonna, which is even found in some of the drug stores in this city, for it is an uncertain preparation unless when procured by evaporation in vacuo, for some samples from some of the Parisian shops were found by Orfila to be quite inert.

Dr. Williams, of London, has used belladonna with great advantage in his practice. He gives it in quarter-grain doses to a child of two years, increasing the dose to double that quantity or more, where it fails to relieve. He remarks that these doses, in general, cause some dilatation of the pupil, and conceives that the remedial agency of the drug depends on the same power to diminish irritability of the bronchial and laryngeal muscles which is here evinced with regard to the iris."†

Dr. G. A. Rees has found belladonna one of the most efficacious remedies in Pertussis.‡

\* Report Phila. Co. Med. Society for 1853.

† Gibb on whooping cough, p. 284, from Medical Gazette, Feb. 1838.

‡ Diseases of Children, 2d edition, 1844.



Dr. Waller cured two cases with the twelfth of a grain of extract, three times a day; prussic acid and conium had failed in affording any permanent relief.\*

Eberle assigns the highest place among narcotics to belladonna in whooping cough.

Dr. Churchill says that this is perhaps the most influential narcotic and sedative we possess (in pertussis); it has been very extensively employed, and the evidence in its favor is very strong.†

Belladonna has been eminently useful in the epidemic of whooping cough which M. Debreyne has observed, but recourse should not be had to it until the inflammatory element has been overcome by leeches, emetics, &c.

Dr. A. T. Thompson says, I have ordered the extract of belladonna in doses of one-eighth of a grain to a child of eight years, and gradually increased the dose to a quarter of a grain. Its power over the cough is extraordinary.‡

I might bring forward the testimony of many other writers, and a mass of evidence from medical practitioners, to establish still more firmly the fact of the efficacy of belladonna in this peculiar malady, but it will not, I trust, be necessary.

I will now endeavor to give an epitome of the experience of the best writers in the treatment of whooping cough by means of other agents.

The first of these which I will notice is *alum*, which has been very highly recommended by Dr. Golding Bird; it has been employed with success by Dr. John F. Meigs, of this city, who speaks of it as follows, in his useful work on diseases of children: "From reading Dr. Bird's remarks on alum, and prompted by my knowledge of its admirable qualities in the treatment of croup, I was led to make trial of it in the disease under consideration, and I believe I may say that it has exerted a more decided influence in moderating the violence of the disorder, than any remedy that I have ever made use of. I have administered it in fifteen cases, beginning in the course of the second stage.

In all, it was beneficial, and in some the effects were strikingly useful, the improvement being more rapid than I had ever seen to result from other remedies."

Dr. Bird gives from two to six grains every four hours. His formula is as follows: *R. Aluminis, gr. xxiv; Ext. Conii, gr. xii; § Syrup Rhoëados, 3ii; Aquæ Aneth. f. 3iij. M.* Give a medium-sized spoonful every six hours. Dr. Meigs gives it in smaller doses, and without the *Ext. Conii*. To children under one year, half a grain to a grain three or four times a day; and to those over that age, two grains every six hours.

\* *Lancet*, vol. 1, 1845, p. 137.

† *Elements of Materia Medica*.

‡ *London Jour. of Medicine*, April, 1850.

§ This is considered by Dr. Butter as *the* remedy, namely conium, for whooping cough, and he eulogises its use.

Dr. Crossly Hall, an English physician, employs the *alum* in powder, prescribed in a little water eight times a day, and he considers it a very useful remedy.

Mr. Davis highly extols the efficacy of *alum* in pertussis. In the last edition of Underwood's Treatise, edited by him, he says: "After a long trial, I am disposed to attach more importance to *alum*, as a remedy in whooping cough, than to any other form of tonic or anti-spasmodic. I have often been surprised at the speed with which it arrests the severe spasmodic fits of coughing; it seems equally applicable to all ages, and almost to all conditions of the patient. The dose for an infant is two grains three times a day; and to older children four, five and up to ten grains may be given mixed with syrup and water."

I have employed *alum* both in the case of my patients and my own children, and gave it freely; it moderated the intensity of the disease, but it did not in my hands make a cure, so that, after its use, for ten days, I had to resort to the belladonna, which, in a week, completely checked the whoop.

Another agent which has been very highly lauded is the hydrocyanic acid, which is considered by Dr. Thompson, of London, to possess a "specific power" over the disease.

Dr. West, of London, author of a valuable treatise on the diseases of childhood, says, "that the acid sometimes exerts an almost magical influence on the cough, diminishing the frequency and severity of its paroxysms almost immediately, while, in other cases, it seems perfectly inert; and again in others, without at all diminishing the severity of the cough, it exerts its peculiar poisonous action on the system so as to render its discontinuance advisable."

He recommends it to be given by itself, diffused in a little distilled water, sweetened with simple syrup, and the dose he begins with is half a minim every six hours for a child nine months old. He has never but once, however, seen really alarming symptoms follow its use, though he has employed it in many hundred cases; still he remarks that although the severity of the cough may be relieved by the acid, it does not enable the practitioner to dispense with other remedies.

Dr. Hamilton Roe, in his treatise on whooping cough, gives to an infant three quarters of a minim of hydrocyanic acid, Scheele's strength, gradually increasing it to a minim, which is administered every four hours; for a child three years of age one minim, gradually increasing, if necessary, to a minim and a half every four hours. Dr. Roe says he is convinced, from the result of all the trials he has made, that this drug will cure almost any case of simple whooping cough in a short time. Dr. Edwin Atlee first used it in 1824, and from that year until March, 1832, he says he has treated more than two hundred patients, and never failed to cure in from four to ten days.\*

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\* American Jour. Med. Sciences, vol. vii. and vol. x.

This medicine is highly recommended by Muhrbeck, Kahleiss, Volk, Heller, Granville, Lombard, &c. I have tried this acid, but it did not at all please me in its effects.

Another remedy which demands our notice is the precipitated subcarbonate of iron, (ferri sesquioxidum). The following observations on its use are by Dr. H. C. Lombard, of Geneva, who, after praising the virtues of assafoetida, flowers of zinc, opium, prussic acid and belladonna, says, "I come now to my specific, or rather to the remedy advised by Dr. Steyman, as the best antispasmodic in whooping cough. Dr. Steyman had advised to give from four to ten grains of subcarbonate of iron in the twenty-four hours; he gave as a rule to increase one grain for each year, so that a child six years old was to take six grains in a day, but from the beginning I found the dose quite inadequate, and I increased it to twenty-four and thirty-six grains in young children. I have given it either with water and syrup, or mixed with a cough mixture. It has never produced any inconvenience. On the contrary, I have found that all the children treated after this method were much less weakened, and recovered faster than with all other remedies. The proofs of the advantageous effects of it have been so numerous that I can scarcely enter into the detail; however, I may give a few facts to corroborate my assertion. In a child four years old I gave the subcarbonate of iron, and the fits, which in the preceeding week, had been 101 in number, were reduced to 66 in the following week. In a weak and debilitated boy, aged seven years, the powder of belladonna had proved quite useless; when I tried the powder of iron, so prompt was the effect that in a few days the boy was quite cured; the sister of this boy was also cured with great rapidity. The last case of whooping cough which I have treated lately was of four months duration, and every thing had proved useless, when I gave the iron powder, which in the space of a few days succeeded in making the cough less and less.

In fact, I think I may assert with security, that the subcarbonate of iron enjoys a remarkable property to make the fits less violent, to diminish the number, and after a certain number of days to cure entirely the whooping cough.

It enjoys, besides, the advantage of strengthening the little patients, and gives them force to resist a complaint which sometimes lasts some weeks, and generally leaves the patients weak, low and exhausted. In some of those who have taken it, I have often seen, during the first days, a temporary increase of the cough, but it always subsided after two or three days, and did not prevent the good effects of the medicine. The beneficial results obtained by the use of the iron powder are easily explained by its anti-periodic and anti-neuralgic properties, and it shows *a posteriori* how much the whooping cough resembles a true neuralgia, or, at all events, a true nervous disease."



I have not tried this remedy, and can, therefore, give no opinion of its efficacy; but should judge from its tonic and blood-restoring properties, that it would prove a useful agent in low anæmic or debilitated cases.

Garlic is a remedy very highly recommended by Dr. Dewees; indeed he states in his work on Diseases of Children, "that he has never employed any remedy of equal efficacy."

A child of six or seven years may begin by taking a third of a common sized clove, morning, noon and evening, in the absence of all febrile excitement, gradually increasing the dose.

Mr. Sutcliff combined the Peruvian bark with cantharides, and administered it with great success in whooping cough during twenty years.

The following is his formula:

|                       |          |
|-----------------------|----------|
| ℞ Tinct. Cort. Peruv. | f. ʒ vi. |
| Elix. Paregor.        | ʒ ss.    |
| Tinct. Canthar.       | ʒi M.    |

Of this mixture, small doses were given three or four times a day, gradually increasing until a slight strangury was excited, then the dose was to be diminished.

When the active symptoms have subsided, Dr. Beatty, of Dublin, used the same remedy, and it is also recommended by Dr. Graves. The following is his formula.

|                        |       |
|------------------------|-------|
| ℞. Tinct. Cinch. Comp. | ʒ v.  |
| “ Lyttæ,               |       |
| “ Camphoræ, aa.        | ʒ ss. |

M. S. A teaspoonful three times a day in flaxseed tea or barley water.

Professor Trousseau recommends the following solution of nitrate of silver in whooping cough; one-fifth of a grain in solution with simple syrup daily.

Cauterization by nitrate of silver has also been employed as a remedy in pertussis by Dr. Eben Watson, of Glasgow. The strength of the solution is gr. xv. to the ounce of water, applied every second day, by means of whalebone tipped with sponge, at first to the pharynx, and then to the glottis and larynx. The whole number of cases treated by M. Joubert and Dr. Watson, in 1854, were 167.

|                           |               |         |           |
|---------------------------|---------------|---------|-----------|
| Cured in two weeks,       | 96 cases,     | or 57.4 | per cent. |
| “ in three or four weeks, | 61 “          | 36.5    | “         |
| Resisted the treatment,   | 9 “           | 5.3     | “         |
| Died,                     | 1 “ or nearly | 0.6     | “         |

To prevent the irritability of the stomach, he gives frequent small doses of heavy magnesia, combined with a few grains of the trisnitrate of bismuth. He also employs the index finger or teaspoon to make the application to the throat of children.

Nitric Acid was first recommended by Dr. Arnoldi, of Montreal, as a remedy in pertussis with much success, and it has

been adopted by Dr. Gibb, of London, late of Canada, who has published a work on whooping cough, in which he has given the opinion of ninety-three physicians, in relation to its pathology, with its history, mortality, complications and causes. He has also entered into a consideration of forty-three remedies, viz.: venesection, leeches, emetics, antimonials, external applications, change of air, warm bath, hydrocyanic acid, laurel water, belladonna, opium, hemlock, henbane, digitalis, tobacco, arsenic, silver, iron, zinc, lead, copper, cauterization by nitrate of silver, inhalations, coffee, Peruvian bark, quinine, hydrochloric acid, sulphuric acid, nitric acid, cochineal, alum, tannin, vegetable acids, alkalies, vaccination, cantharides, musk, assafoetida, meadow narcissus, cup moss, castor, nux vomica, and miscellaneous remedies. He remarks that the nitric acid has succeeded over and over again when other means have failed, and it is not such a hazardous remedy, when administered with ordinary precaution, as many described by him in his work. Dr. Arnoldi's method of prescribing the acid is as follows:

"To a tumbler full of very sweet water (almost syrup,) add as much acid as will bring the water to the strength of pure lemon juice, when it is ready for use; an adult may consume this quantity in three or four hours, a child one year old may take a desert spoonful every hour."

"He has remarked that the efficacy depends on the amount taken, and that especially by the frequency of repetition, to save the teeth, he advises a solution of carbonate of soda, two drachms to eight ounces of water, to be used as a gargle immediately after taking the acid."

"The object entertained by Dr. Arnoldi, in using this acid as a remedy, was to introduce the elements of the atmosphere into the blood by the process of gastric digestion, so as to enable the lungs to outstand the stage of temporary asphyxia. Whether the theory be correct or not, the result, he says, of his practice has been almost universally successful." He then goes on to give the outlines of twelve cases which were treated by Dr. A. with success. The doctor met with a few cases where the disease seemed to resist the action of the acid, owing, he remarks, to "spinal torpor at the track of the eighth pair and phrenic. In these the application of an ointment of the biniodide of mercury, so as to produce the specific eruption, and this produced a second and a third time, completely restored the efficacy of the acid."

"Dr. Gibb's own cases were sixty-four in number, which are reported as cured; he combines the acid with honey or syrup, and compound tincture of cardamom, &c."

Chloroform has been employed by Dr. Fleetwood Churchill, as a specific remedy in whooping cough in four cases which he reports; in two of these the whoop ceased in two days; in the third case it required its use for three weeks; in his fourth case

the patient had to resort to the use of Prussic acid to complete the cure.

"In the case of young children he drops thirty drops on the palm of the hand, the mother to hold this before the mouth and nose of the child, sufficiently near to inhale it fully, but not so close as to exclude a portion of atmospheric air. The best time to begin is just as the patient feels the irritation in the chest increased to a cough.

Still he considers it more suitable for young persons of twelve or fourteen years old and upward. Two successful cases have come under my notice; the method was by placing a small portion of chloroform in a vial, and when feeling the inclination to cough, to inhale by removing the cork, the small bottle being carried in the pocket."

Before concluding my remarks upon the treatment of this disease, I must not neglect to state the great importance attached by some authorities to a change of air in the last stage, or the debility which results from it. Dr. Lombard remarks, that "in many cases which had baffled all attempts to stop the cough, a change of air has accomplished the cure. I have found it equally indifferent to go out of town, or to come into town, provided there be a change; and even in the short distance of half a mile, I have seen the good effects of this plan of treatment." Dr. West, of London, says that change of air with the use of alum during the last stage, generally expedites the cure." According to Dr. Gregory, change of air after severe and protracted cases is the only thing that will give the patient a chance of recovery.

Billard states "that goat's milk, pure or diluted, a good nurse, a residence in the country, particularly in the spring and summer, will materially conduce to the recovery of infants at the breast."

But nothing can be more pernicious than the exposure of children suffering from whooping cough, to cold or inclement weather for it will bring back the cough and cause inflammation of the lungs.—[*Medical Examiner*

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### *Vicarious Menstruation.*

We find the following cases, reported by Prof. Boring, in an interesting article contained in the Atlanta Medical Journal:

"The first is, that of a married lady, Mrs. —, twenty-two or three years of age, of rather feeble constitution, sensitive, nervous habit, poor digestion, and generally feeble health. She menstruated first at the usual age and continued healthy in this respect for the space of three or four years, when the catamenial flow was suddenly arrested by falling into a stream of water, the discharge being present at the time. Since then she has been the subject of irregular menstruation, the secretion coming on sometimes too



soon, then too late; at times insufficient in quantity, and at other periods profuse and exhausting. She has been married about two years, but without issue. When I first saw her, she was laboring under what was supposed a dangerous attack of hemorrhage from the stomach and bowels. I found her vomiting and purging what seemed to be decomposed blood, with great exhaustion, and the pulse ranging from 120 to 125 in the minute. It did not occur to my mind at first, that this was an instance of Vicarious Menstruation, but the physician who had been in charge of the case, having blistered over the region of the stomach, and administered the usual remedies, I determined to wait and extend my observations before instituting treatment. In the mean time, developments went far to impress me with the opinion, that the disease, was not one of real hemorrhage, but of menstrual character. Upon instituting thorough inquiry into the history of the patient, I became satisfied of the nature of the case, and treated it accordingly. The attack soon passed off, and the patient recovered a pretty good state of health. My efforts were then directed to the correction of the uterine system and the establishment of healthy menstruation. In this, I have been partially, and only partially, successful. The catamenial secretion has become almost uniform in regard to the time of its recurrence, but is sometimes protracted and profuse, and not unfrequently attended with severe headache and distressing nausea. I have also observed a strong tendency on the part of the stomach, at each monthly period, to become nauseated, and, as I believe, to take on this remarkable action.

"Before concluding this case, I ought to state, that it not unfrequently happens with this patient, that at her menstrual periods the breasts become more or less tumefied and painful, and at the same time similar appearances occur on other parts of the body, particularly on the chest.

"The second case alluded to, is that of a negro woman, belonging to Mrs. —, about thirty-five years of age, of apparently good constitution, and, with the exception about to be mentioned, general good health.

"She began menstruating at the age of fifteen, and continued regular in this respect until about three years since. Eight years ago, when about twenty-seven years of age, she was attacked with violent pain in the foot, which was succeeded by an abscess, which was lanced, but did not heal. Ulceration succeeded, which continued to move upwards until the leg was involved and became the seat of its permanent location. About three years since, the catamenial discharge began manifestly to decline, and so continued until it ceased altogether, when she was seized with severe shooting pains, passing from the sacro lumbar, to the uterine region, and to the ovaries. At the approach of her next menstrual period, she noticed a slow oozing of blood from the ulcer on the leg, (I

give her own account of the matter,) which continued about the usual time of that discharge and ceased. At subsequent *periods*, the same discharge sometimes occurred, while at others, instead, small sacks of blood were formed contiguous to the ulcer, which were obliged to be opened and the blood discharged, before relief could be obtained.

"In June last, the ulceration of the leg had become so extensive and threatening, as to require, in the judgment of Dr. —, (whose patient she then was,) amputation.

"Since the operation, the ulcer being removed, there has been no regular monthly periodic discharge of blood, but, at each monthly period, sacks, such as were above described, form around the stump of the amputated limb, and require to be lanced for the relief of the patient. I have seen these sacks, and in fact opened them, and can entertain no doubt as to their true nature. So uniform are these singular occurrences in their periodic character, as to have induced this woman to keep a lancet for the purpose, and thus *surgically* to perform the work of menstruation. It should be observed that she continues without any vaginal discharge, and that the determination of blood to the stump of the amputated limb, together with the formation of these sacks of blood, occur periodically, and observe *strictly* the menstrual periods, as to the time of their recurrence and duration."

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*Suggestions upon Animal Odor.* By CHARLES VAN ALLEN, M. D.

Each genus, species, and perhaps individual, of the whole world of animal life, is probably distinguished by its peculiar odor. We will not discuss with the metaphysician the question, whether odor exists independently of the sense of smell; we take it for granted that it is a property of certain forms of matter, independent of this sense. This fact, so apparent in animals that come within the ordinary scope of observation, justifies the conclusion by analogy; that the whole animal kingdom is similarly endowed. Some of the more prominent examples will naturally suggest themselves to the student of Natural History. The musk odor, with its numberless varieties, belong to the musk deer (*moschus moschiferus*) to several of the ape kind, and to the different varieties of the musk rat; the peculiar smell of the civet, that of the castor (*castor fiber*) and the strong offensive odor of the pole cat and of our native skunk; and among insects, the delicate musk perfume of the *cerambix muschatus*, the *apis fragrans*, and the *tipula moschifera*, and the odor of the *cerambix saveolens*, nearly allied to, though more delicate than, the rich perfume of the otto of roses,—offer readily illustrations of the extent and variety of animal odor. In man, as in other animals, there exists a peculiar distinctive odor, not impressing itself in a state of health with much intensity upon our duller sensation, but

always clearly perceptible to the more acute sensibility of some of the lower animals. It is contended with some degree of plausibility, that each race of mankind has its distinguishing odor. "The Peruvians," says Humboldt, "who in the middle of the night, distinguish the different races, by their quick sense of smell, have formed three words to express the odor of the European, the American Indian, and the Negro." The following observation is quoted by Blumenbach from *Thibault de Chambollon*, in reference to the Caribbeans. "They have all a strong and disagreeable smell. I cannot," says Chambollon, "give the remotest idea, by description, of its peculiarity. Whenever a similar odor is observed, is called at the Antilles, the Caribbean smell, which proves the difficulty of defining it." It is generally conceded, and most of us have daily opportunity for obtaining olfactory evidence of the fact, that the negro emits a peculiar odor, distinguishing him from the white race. Dr. Carpenter denies this. He allows that the negro, in common with the Hindoo, secretes a more abundant perspiration than the white, but asserts emphatically that it is not more odoriferous. Dr. Prichard, on the other hand, though an earnest advocate for the unity of origin of the whole human family, remarks in speaking of the perspiration of the dark colored races, that it has a peculiar odor, which is well known in negroes and the Caribbee Indians. On the score of smell, no obstacle exists to the most intimate relations between the white man and the negro, which will not easily yield to a due application of soap and water.

That each individual as well as race, of the human family, is endowed with a peculiar odor, seems evident, from the ease with which the dog scents his master. The interesting history of Julia Brace, an inmate of the Hartford Asylum, affords further evidence of the fact. This unfortunate girl, born blind, deaf and dumb, having no other mode of communication with the external world than by the sense of smell, taste, and touch, by the increased power of which nature strove to compensate her for her severe affliction, was enabled to distinguish persons, by the exercise of the first sense alone. The eloquent author of the "*Religio Medici*," and the "*Urn Burial*," has some observations pertinent to this subject. "We acknowledge," he says, that "certain odors attend on animals, no less than certain colors; that pleasant smells are not confined to vegetables, but found in divers animals, and some more richly than in plants; and though the problem of Aristotle inquires, why no animal smell sweet beside the *pard*, yet later discoveris add divers sorts of monkeys, the civet cat and jazelon, from which our musk proceedeth. We confess that beside the smell of the species, there may be individual odors, and every man may have a proper and peculiar savor, which although not perceptible unto man, who hath this sense but weak, is yet sensible unto dogs, who thereby can single out their master in the dark. We do not deny that particular men have sent forth a pleasant savor, as Theophrastus and Plu-



tarch report of Alexander the Great, and Tzetzes and Cardon do justify of themselves." In that charming specimen of self-portraiture, the autobiography of Lord Herbert of Cherbury, the brave knight, the courteous gentleman, and the learned scholar, presenting in his character the rare union of a complete knowledge of the world and the deepest wisdom of the closet. we read, "It is well known to those who wait in my chamber, that the shirts, waistcoats, and other garments I wear next my body, are sweet beyond what easily can be believed or hath been observed in any else; which sweetness also was found to be in my breath above others, before I used to take tobacco, which toward my latter days, I was forced to take against certain rheumes and catarres that troubled me, which yet did not taint my breath, for any length of time." In a quaint old work entitled "The life of the learned and pious Dr. Henry More, late fellow of Christ College in Cambridge, by Richard Ward, A. M.," the author remarks, "I was mentioning somewhat but just now of his body, and this reminds me of some things that were peculiar in that also as well as in his mind; he has told us occasionally, in a discourse concerning the famous Greatrakes and what was extraordinary in that person," "that not only his own urine had naturally the flavor of violets in it, but that his breast and body, especially when very young, would of themselves in like manner send forth flowery and aromatic odors from them, and such as he daily almost was sensible of, when he came to put off his clothes and go to bed; and even afterwards, when he was older, about the end of winter or beginning of spring, he did frequently perceive certain sweet and hebeaceous smells about him, when yet there was no such external objects near, from whence they could proceed."\* These reports of sweet smells must be taken "cum grano salis," to give them the savor of truth. They probably take their origin in an exaggerated egotism, which envelops in its incense every thing that pertains to self.

In considering the physiology of animal odor, and endeavoring to trace out its cause, considerable difficulty is encountered from the unsubstantial nature of the object of investigation, from the impossibility of discriminating with exactness its varieties, and from the various degrees of sensibility of different observers. Attempts have been made to classify systematically the various odors. The most plausible one divides them into *Acidulous*, *Spirituos*, *Camphorous*, *Fragrant*, *Somniferous*, *Fetid*, and *Alkaline*; but these terms do not admit of a strictly philosophical application. All odors are composite, and all individuals are possessed more or less of an idiosyn-

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\* In a late work, called the Table Talk of Samuel Rogers, we find the following: "Sir Henry Englefield had a fancy (which some greater men have had) that there was about his person a natural odor of roses and violets. Lady Grenville hearing of this and loving a joke, exclaimed one day when Sir Henry was present, "Bless me, what a smell of violets!" "Yes, said he, with great simplicity, "it comes from me."

cracy of sense. These facts present themselves as insuperable obstacles to an exact definition. The physician, in this as in every other department of the science of medicine, must not confide too trustingly in fixed rules, but endeavor to sustain his uncertain steps by individual experience and observation.

Various animals (of which mention has already been made) more prominently distinguished by their odor, such as the musk deer, the civet, and the castor, have peculiar organs, generally situated in the neighborhood of the genitals, devoted to the particular function of generating odor. In others, as the pole cat and the skunk, the stench is due to the ordinary secretions. The odor of these various animals is not of the same intensity at all times and seasons. With some it is voluntary, and thrown out as a protection against attack; and with others it is generated independently of the will in the rutting season, as a source of attraction between the sexes. Animal odor in its natural condition, of whatever kind, is unquestionably a source of pleasure to its possessor, and to those of the same order, and of repugnance to most others, which contribute towards preserving the integrity and individuality of the races, thus administering to a wise purpose in the economy of nature.

The principal sources of odor in man, are the breath, and the different secretions. The air expired gives out the odor, in diminished intensity, of the ordinary articles of diet consumed. The perspiration has naturally an acid odor, differing in degrees in various parts of the body, being more sensible in the groin, in the neighborhood of the genitals, and the feet. The other secretions and excretions have peculiar smells of their own, each of which contributes towards producing in man his distinctive odor. This is affected in a remarkable manner, and very variously, by habits of life, the atmosphere, diet, and more especially disease. Persons engaged in certain employments, whatever may be their attention to personal cleanliness, are observed to become so impregnated with the peculiar odor of the objects by which they are constantly surrounded, as to give it out long after a change of occupation. Chomel states that he had a hostler under his charge at the hospital, who during the course of a bilious fever, exhaled a strong smell of the stable, although all his clothes had been removed, and he had been repeatedly washed. All who approached him felt assured that the odor proceeded directly from the patient himself.

The effect of diet and of various articles used as remedies, in altering the animal odor, is a familiar fact. Those in the habit of eating garlic and onions, habitually smell of the peculiar odor of these plants; and the Greenlander, whose constant vegetable food is of the *pea* kind, is reported by travellers to emit a leguminous smell; the noisome stench which infects the urine, after eating asparagus, cannot have escaped the dullest sense of smell; and the violet odor from the administration of the oil of turpentine, the peculiar flavor given to the breath and urine and the perspiration by

copaiba, sulphur, and various other remedies, are the results of everyday observation. It is doubtless the vapor of the essential oil belonging to the articles taken into the system, which is thus exhaled, and which, though not sensible to chemical tests, becomes evident to the sense of smell. The varieties of odor among individual races are attributable probably to their various modes of life.

The effect of disease is increasing and varying the animal odor of the human body, more especially recommends itself to the regard of the medical observer, from its direct bearing upon diagnosis. It is believed that much useful information would be the result of directing inquiry and observation upon this subject. Its investigation is urged upon the physician as promising to result in a fair return of profit, available for practical purposes. Certain diseased conditions of the system affect in a remarkable manner the odor of the breath, and thus afford a valuable symptom of their existence. In some febrile diseases the breath acquires a sweetish, and in various affections of the stomach a strong pungent, acid odor. This acidity is occasionally of such intensity, as to impregnate every thing which surrounds the patient, his clothes, bedding, and the whole furniture of the room; and is indicative of a severe form of gastric disease, which most frequently results in death. In gangrene of the lungs, the breath emits an odor of putrified flesh, a most unvarying and important distinctive symptom of this disease. In several forms of dyspepsia, in bilious fever, in scurvy, and in the latter stage of consumption and typhus fever, it assumes a fetid character. Mercurial salivation, and various affections of the mouth and throat are easily discernible by the peculiar and offensive odors they give to the breath. A fit of drunkenness is invariably detected by the spirituous odor exhaled from the lungs, when otherwise there might be danger of confounding it with severe disease. The perspiration in a variety of different affections undergoes sensible changes in odor, worthy of the physician's regard. In prolonged constipation, a very marked odor of sulphureted hydrogen is observed, especially in females, who are more apt to neglect the state of their bowels, and whose false modesty disposes them to conceal their condition from their physician. This odor will be found a useful, and often the only attainable indication in such cases.

In various diseases of the skin, a peculiar smell of the transpiration is an unvarying symptom. In all syphilitic eruptions, the odor is marked and peculiar. In small-pox it is equally distinctive and prominent, and is by many compared to the smell of mouldiness; in porrigo favosa also, it resembles the stench of cat's urine, and in miliary fevers, by some it is likened to the smell of lime, by others, to that of decayed straw. A peculiar fetid smell of the perspiration of the feet is frequently observed, and presents a troublesome and obstinate disorder. The writers upon the sweating sickness, the terrible plague which devastated Europe in the 15th and 16th centuries, have exhausted their powers of language, in endeavoring to



describe the rankness of the odor of the perspiration which was the prominent symptom in that disease. They speak of the horrible stench of the sick, the *odor teterrimus*, of the afflicted—being surrounded by a thick stinking mist—of their lying, as it were, in a stinking swamp of sweat, and overwhelmed with disgust of themselves, in consequence of their loathsome and ill-odored condition. In rheumatic diseases, most of the secretions and excretions are perceptibly changed in odor, and more especially the sweat, which assumes a nauseous, acid smell. Fevers of a low typhoid character are easily indicated by an odor like that of mice; and in the latter stages of typhus, the smell is decidedly cadaverous. The insane are observed to emit a peculiar odor from the skin. The urine also acquires various odors in different diseases. In Bright's disease it sometimes exhales the smell of boiled beef; and in diseases of the bladder and some typhoid affections, that of shell fish; in acute inflammatory disease, and in various disorders of the kidneys, an ammoniacal odor. The smell peculiar to the fæces varies frequently in disease. It is of a cadaverous nature in typhoid fever and chronic diarrhœa; and resembles that of macerated flesh in certain malignant dysenteries. In many of the diseases of the digestive organs in children, its condition supplies important indications. The stools are offensive in the early stages of cholera infantum, and again inodorous in its more advanced periods, and in the severe forms of dysentery. The odor of what is thrown up in vomiting aids in forming a just notion of the nature of the disease in which it exists. The sense of smell is necessarily applied to for a right appreciation of the condition of certain ulcers, putrescent wounds, gangrene, and purulent deposits. The odor is the most reliable means for the detection of poisons by prussic acid, and aids in discovering the presence of the metallic, narcotic, and other poisons. The septic condition generally reveals itself by a smell indicative of the process of decomposition. It is to this state that may be attributed the various changes in the animal odor, produced by disease. Whether this disorganization originates in the solids or fluids, or, as is more probable, occasionally in both, it becomes no one in the present state of pathological science dogmatically to decide. That the composition of the humors of the body, is at least secondarily affected, there need be no hesitation in asserting.

It is no longer heresy to speak of the corruption of the fluids, the decomposition, or, in other words, the new chemical combinations set up in them, uncontrolled by the *vis vitæ*. To what else can be attributed the loathsome putrid sweats in the sweating sickness, the cadaverous odor in the last stages of typhus, and the putrescent exhalations in scurvy and other analogous affections? Much progress in pathology has been hindered by the excessive reaction of opinion against the exclusive doctrines of the Humoralists of a past age. Liebig, Prout, Bright, and others, have established a firm foundation of well-ascertained facts, upon which it is hoped

the superstructure of a new and rational system of humeral pathology will arise, fact by fact, cemented fast by experiment and logical deduction.—[*New York Medical Times.*]

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*Treatment of Scarlatina Anginosa.*

Mr. Pye H. Chavasse, F.R.C.S., read before the Medico-Chirurgical Society of Birmingham, March 4th, 1856, the following paper on this disease:

As I have been very fortunate in my cases of scarlet fever, I consider it a duty to bring my treatment before the notice of the members of this Society.

My plan, of late years, has been so uniformly successful (not having lost a case of scarlet fever for upwards of seven years,) that I have not deemed it necessary to keep a record of cases. The system I adopt, in a case of scarlet fever, is to keep the bed-room cool—I may say cold—and to have a thorough ventilation through it: I, therefore, throw open the windows, be it winter or summer, and have the curtains and valances of the bed removed. If it be winter time, I allow the patient to have one blanket and a sheet; if it be summer time, a sheet only to cover him. If the throat be not seriously affected, I merely order a narrow strip of flannel once round the throat. If the tonsils be much enlarged, I apply a barm and oatmeal poultice to the throat, changing it night and morning. I prescribe an acidulated infusion of roses mixture, that is to say, infusion of roses, with an excess of acid, made palatable with an additional quantity of syrup, to be taken every three or four hours. This is the only medicine I give. When the child is old enough, I find roasted apples, mixed with raw sugar, very grateful to the patient.

Here let me pause, to advise my medical brethren always to make medicines for children pleasant. The administration of nauseous medicine to children oftentimes causes sickness, disgust and irritation, which frequently do more harm than the medicine does good.

But to return to our subject: I avoid purgatives in scarlet fever. I never, on any account, give a particle of opening medicine for the first ten days at least. It is my firm conviction, that the administration of purgatives in scarlet fever is a fruitful source of dropsy, disease and death. When we take into consideration the sympathy that there is between the skin and mucous membranes, I think that we should pause before giving irritating medicines. The irritation of purgatives on the mucous membrane may cause the poison of the skin disease to be driven internally, to the kidneys, throat, pericardium or brain. You may say, do you not purge if the bowels be not open for a week? I say emphatically, No!

Now with regard to food. If the infant be at the breast, keep him entirely to it. If he be weaned, and under two years old, give

him milk and water, and cold water to drink. If he be older, give him toast and water, and plain water from the pump, as much as he chuses; let it be quite cold—the colder the better. Weak black tea, or thin gruel, may be given, but caring nothing if he take nothing but cold water, unless he be an infant at the breast. Avoid broths and stimulants of every kind.

Now, you must warily watch for a change of temperature of the skin. As long as the skin is hot, the above plan I steadily follow; but the moment the skin of the patient becomes cool, which it will do, probably, in five or seven days, instantly close the window, and immediately put more clothes on the bed. But still do not purge.

You will find the acidulated infusion of roses most grateful to the little patient; it will abate the fever, it will cleanse his tongue, it will clear his throat of mucous, it will, as soon as the fever is abated, give him an appetite. I believe, too, the acid treatment has some peculiar properties of neutralising the scarlatina poison. I do not pretend to explain how, or why, or wherefore.

When the appetite returns, you may consider the patient to be safe. The diet must now be gradually improved. Bread and butter, milk and water, and arrow-root, made with equal parts of milk and water, may be given for the first two or three days. Then a light batter or rice pudding may be added; and, in a few days afterwards, a little chicken or a mutton-chop.

Within the last few years, I have had some fearful cases of scarlet fever; but, relying on this plan of treatment, I have given, even in very bad cases, a very favorable diagnosis. I have had cases where there have been violent headache and delirium; where there have been immense swellings of the parotid and submaxillary glands; where there has been enormous enlargement and ulceration of the tonsils; where a great portion of the fluid that has been taken by the mouth has escaped down the nostrils; where there has been a purulent discharge down the nose, which discharge has in many instances quite excoriated the skin over which it has travelled;—and yet in such cases the patients have invariably recovered.

There is another important regulation I lay great stress upon. I never allow a scarlet-fever patient, even if the attack be mild, to leave the house under the month in the summer, and then not if the wind be in the East or Northeast; nor under six weeks in the winter. During the last seven years, I have never had anasarca from the scarlatina; and I attribute it entirely to the plan I have just recommended, and in not allowing my patients to leave the house under the month—until, in fact, the skin that has peeled off has been renewed. Dr. Watson, in his valuable lectures, gives some advice on this subject. From the sixteenth to the thirtieth day, I watch the case assiduously, to assure myself that there be no dropsical approach, carefully examining the urine, ascertaining that there be plenty of it, and that it be not albuminous.

Let me now sum up the plan I adopt :



1. Thorough ventilation, a cool room, and scant clothes on bed, for the first five or seven days.

2. A change of temperature of skin to be carefully regarded. As soon as the skin is cool, closing the windows, and putting additional clothing on bed.

3. Infusion of roses with an excess of acid, sweetened, the only medicine to be given.

4. Purgatives to be religiously avoided for the first ten days at least, and even afterwards, unless there be absolute necessity.

5. Leeches, blisters, emetics, and cold and tepid spongings, inadmissible in scarlet fever.

6. A strict antiphlogistic diet for the first week, during which time cold water to be given *ad libitum*.

7. The patient *not* to leave the house in the summer under the month; in the winter, under six weeks.

My firm conviction is, that purgatives, emetics, and blisters, by depressing the patient, sometimes cause scarlatina anginosa to degenerate into scarlatina maligna; for although I have had numerous cases of scarlatina anginosa (my practice being much among children,) and some of the cases very severe ones, I have never had, since I have adopted my present plan of treatment, one single case of scarlatina maligna. I have such faith in my present plan of treatment, that if it be duly followed out, I should seldom despair of even the worst of cases recovering.

I am aware that some of our first authorities advocate a different plan to mine. They recommend purgatives, which I may say, in scarlet fever, are my dread and abhorrence. They advise cold and tepid spongings—a plan which I think dangerous, by driving the disease internally. Blisters, too, have been prescribed; these I consider weakening, injurious, and barbarous, and likely to irritate the already inflamed skin. They recommend leeches to the throat, which, I am convinced, by depressing the patient, lessen the chance of battling against the disease, and increase the ulceration of the tonsils. Again, the patient has not too much blood; the blood only is poisoned. I look upon scarlet fever as a specific poison of the blood, and which will be eliminated from the system, not by bleeding, not by purgatives, not by emetics, but by a constant supply of fresh and cool air, by the acid treatment, by cold water as a beverage, and for the first few days by a strict antiphlogistic diet.

Sydenham says, that scarlet fever is oftentimes “fatal through the officiousness of the doctor.” I conscientiously believe that a truer remark was never made; and that, under a different system to the usual one adopted, scarlet fever would not be so much dreaded.

Let me urge my medical brethren to give my treatment a fair trial, and I am convinced that they will then add their testimony to mine, that the plan is a good one. I have spoken out fearlessly and boldly; but I feel so satisfied of the truth of my sentiments, and of

the immense importance of the subject, that I could not be less emphatic.—[*Ass. Med. Jour.*

*Varioloid and Varicella.* By PROF. TROUSSEAU.

Many practitioners of high scientific repute believe that the same relationship prevails between varicella and varioloid as between this last and variola. This it is impossible to admit. If we bring an individual having genuine vaccine scars in contact with a small-pox patient, he may take a varioloid, and, while suffering from this, he may communicate a true variola to a subject who has neither been vaccinated nor had the smallpox. If we take the pus from a varioloid patient, and inoculate the healthy person, as has been done in epidemics when vaccine lymph has run short, we produce the legitimate smallpox. These are so many proofs of the identity of the two affections. It is not thus with varicella. It neither arises from contact with varioloid, or is capable of communicating true variola. We see it arise just as easily in persons who have had that disease, as in those who have been exempt from it; in the unvaccinated, and in those who have been vaccinated. M. Trousseau has seen an epidemic of varicella at the Neckar Hospital, which attacked all the children, a short time after vaccination had been quite successful. This is an important question in hygiene, inasmuch as varicella, of itself, is an affection destitute of danger; and we may leave the subject of it in communication with surrounding persons, without the fear of finding a serious malady developed. The same practice, pursued in varioloid, might give rise to a mischievous development of variola.

*Varioloid.*—Thirty-five years ago, an authentic example of small-pox after vaccination was unknown, although Jenner had seen examples of this, and had indicated them; but, as there are always to be found persons more royal than the king, so there were practitioners who accorded to vaccine more than he who had discovered and propagated it had claimed for it. In 1825, a very violent epidemic of small pox prevailed in Paris, during which individuals who had been vaccinated were attacked. M. Husson, who was one of the Vaccine Committee in 1800, and one of the most ardent promoters of vaccination, contested the validity of these cases; and so extraordinary was the circumstance thought to be, that whenever a varioloid patient arrived at the hospital, the bells were loudly rung, in order to call as great a number of practitioners together as possible for the verification of the fact. An epidemic at Edinburgh, and two at Marseilles, multiplied examples. The attention of governments became aroused, and especially in Germany, where revaccination has been rendered obligatory. At the present day, there is no hospital in which we may not see persons having the vaccine scars the subject of variola, and even dying of it. It may occur even as early as the second or third year after vaccination;

and M. Trousseau has seen an infant at the Necker Hospital take a genuine variola six weeks after a successful vaccination. A mother and her three children also took it soon after vaccination, and in the woman, who died, it was confluent.

At its onset varioloid differs in nowise from variola. Fever arises and continues until the eruption appears. We see, however, more frequently supervene a scarlatiniform or petechial eruption, but it does not influence the prognosis unfavorably, as in variola. The eruption does not differ from that of variola, until the eighth day; but at the eighth day from the commencement, or the fourth from the eruption, in place of tumefaction and inflamed areola supervening, we find the integuments become pale and flaccid. The pustules do not become larger, remain acuminate, and umbilicate but little. They dry without bursting, become rugous, and pass into the "horny" condition. Those of the limbs, in place of acquiring a size three or four times as large as those of the face, do not increase, and cornify in the same manner. By the tenth day the eruption is dry. In more serious forms, when the varioloid, as sometimes happens, is confluent, there is sometimes secondary fever; but at the tenth day, the tumefaction stops short, without any accident supervening, while in variola its doing so would be of fatal augury. The whole terminates with a rapid desquamation, although marks may remain, especially in persons with delicate skins.

*Varicella.*—When a child is brought to the Necker with varicella, the date of its admission is noted, and sixteen or seventeen days later, other children always exhibit the same disease. If, on the contrary, it had been a small-pox case, other cases would have been observed from nine to eleven days afterwards—showing that the period of incubation is very different in the two affections. A child, in good health, whether vaccinated or not, whether having had variola or not, becomes suddenly the subject of a sharp attack of fever, there being present neither vomiting nor lumbar pain. The next day, or sometimes even the same day, fifteen or twenty red points are observed upon the skin, and some hours later the epidermis is raised. Twenty-four hours after the appearance of the red points we observe bullæ or phlyctænæ, quite rounded in form, and transparent, as if they contained water. They resemble sudamina, magnified from ten to fifteen times. In variola and varioloid the eruption never assumes this bullar form. In those diseases, too, the fever and the eruption continue until the latter is completed. In varicella the phenomena take place successively. There is a day of complete apyrexia, the fever comes on during the night, and the next day we find from thirty to forty points of eruption. The same takes place during the next twenty-four hours, and so on for four or five days, so that we have four or five successive eruptions. Twelve hours after the appearance of the eruption, there is a limpid bulla formed, and forty-eight hours after the liquid has become lactescent, which is never observed in any form of va-



riola. In variola discreta the eruption is of a very regular, rounded form, like wax dried upon the skin; but after two or three days the bullæ of varicella become unequal, irregular and puckered, but never offer any appearance of umbilication. When pus begins to form in the phlyctænæ, a livid red, inflammatory areola is produced, larger in size than the variolous areola. When the pustule bursts it leaves a dark brown scab, having nothing in common appearance with the yellow scab in variola, but much resembling that of echthyma. From twelve to fifteen days are required for the complete evolution of a variolous pustule, while four, or at most five, days suffice in varicella. So little dangerous is this affection, that M. Trousseau knows of no example of its having terminated fatally. Still, in some children, who manifest the purulent diathesis, it is followed by successive eruptions of pemphigus, which terminate by exhausting the patient and causing death. But these deaths cannot be imputed to the varicella itself.

Thus then, variola and varioloid are identical; while varicella is distinguished from these by the differences in its period of incubation and febrile paroxysms, by the form and duration of its eruption, and by the absence of danger.—[*Ranking's Abstract.*

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*Case of Varicocele cured by Retrenchment of the Scrotum.* By SAM'L B. RICHARDSON, M. D.

The well-known chagrin and mental despondency, resulting sometimes in mono-mania and suicide, which constitute a part of the history of this distressing and not unfrequent malady; not to mention the uncertainties, danger and sometimes fatal results of operations for its radical cure heretofore, impart more or less of interest to every well attested case of successful treatment. With these views, the following observations are placed before the profession.

Case. B—H—, Esq., of Southern Kentucky, aged 29 years, unmarried, of respectable family, possessing a good constitution, the only disease from which he has ever suffered being intermittent ague and fever, which occurred during his adolescence and early manhood.

In the midst of health and cheerfulness, on the 27th of October, 1838, an amicable rencounter took place between himself and a companion, in a tussle or wrestle, resulting in his friend falling beneath him. Just at the moment of greatest effort, he felt a sharp cutting pain, of short duration, in his left spermatic cord near the external ring. The day succeeding, a tumor was discovered in the cord near the testes, which gradually increased in size up to the time of operation. A month succeeding the accident, pain, with a sense of languor and aching, was felt in the right groin, hip, and loins, attended with no inconsiderable mental despondency, which symptoms afterward frequently exasperated and remitted. In the

month of May, 1839, he came to Louisville to consult me respecting his case, when I discovered a marked varicocele of the left spermatic veins, with an increase of the constitutional and mental symptoms, and the digestive organs not acting healthfully.

I informed him that nothing short of a surgical operation promised permanent benefit; but to this he objected; and, preferring a trial of other remedies first, and promising if they proved unsuccessful, he would return in the autumn, and submit himself to any treatment I might consider best. The remedies then prescribed were designed to correct the disordered state of the stomach and bowels, and to compress the enlarged veins; but they only succeeded in ameliorating the general and local distress, without lessening the original malady. On the 13th of October, this patient arrived in Louisville a second time; and three days thereafter I operated upon him by removing quite a large section of the entire scrotum and sub-jacent cellular tissue, in the presence of and aided by Drs. Donne and T. L. Caldwell. The part removed, which laid bare the testes, measured, when moderately stretched,  $5\frac{1}{2}$  by  $3\frac{1}{2}$  inches in extent. The wound was closed by five interrupted sutures, and interposed adhesive strips, over which was placed a light dressing of lint spread with simple cerate, and the parts placed in an elastic silk suspensory bandage, firmly drawn up. Adhesion took place throughout, with slight exception, and but little constitutional reaction occurred. The fourteenth day succeeding the operation, Mr. H. visited my office, when I could discover no evidence of varicocele. He left for home the eighteenth day after the operation. The evening before, I was happy to find, upon a careful examination of the cord, that no enlarged veins existed while he was in the erect posture, and after continuous exercise about the city; nor was he able to enlarge them by the most forcible expulsive efforts of the diaphragm and other abdominal muscles. All his previous pains, and the uneasiness of the right groin, hip, and loins, had ceased, and there remained but a slight fulness of the cord at the external abdominal ring.—[*Louisville Kentucky Review*.]

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*Cure of Itch in half an hour by Sulphur in a liquid form.*

Dr. E. Smith called attention to an article in the *Gazette Hebdomadaire*, by Dr. Bourignon, in which is a confirmation of the value of the treatment of itch, in Belgium, by sulphur, combined with lime, in a liquid form. The remedy is prepared by boiling one part of quick lime with two parts of sublimed sulphur, in ten parts of water, until the two parts are perfectly united. During the boiling it must be constantly stirred with a piece of wood, and when the sulphur and lime have combined, the fluid is to be decanted and kept in a well stopped bottle. A pint of the liquid is sufficient for the cure of several cases. It is sufficient to wash the body well with warm water, and then to rub the liquid into the skin for

half an hour. As the fluid evaporates, a layer of sulphur is left upon the skin. During the half hour the acarus is killed, and the patient is cured. It is only needful then to wash the body well, and to use clean clothes. In Belgium the treatment is introduced by first rubbing the body for half an hour with black soap; but this does not appear to be necessary. The only essential act is that of the careful application of the fluid sulphur. The lime is of no importance in the treatment, except to render the sulphur soluble, and such would probably be the case if potass or soda were employed. The chief point in the plan thus employed, which is an improvement upon the mode of application of sulphur in substance with lard, is the more ready absorption of the remedy, and consequently the more certain and quick destruction of the insect, by using sulphur in a fluid form. In so disgusting a disease, it must be of great moment to be able to cure it in an half hour.—[*Asso. Med. Jour.*

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## EDITORIAL AND MISCELLANEOUS.

### BIBLIOGRAPHICAL.

*Physical Exploration and Diagnosis of Diseases affecting the Respiratory Organs.* By AUSTIN FLINT, M. D., Professor of the Theory and Practice of Medicine in the University of Louisville, &c., &c. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 636. (For sale by T. Richards & Son.)

Prof. Flint's contributions to practical medicine have already established a high reputation which will be found fully sustained by the valuable treatise before us. It is high time that the profession in our country should place themselves above the reproach of ignorance on so important a branch of their studies as Diagnosis—and we need not add that this can only be done by a careful application of the physical means so elaborately and lucidly developed in this work. No man in this country has done more than Prof. Flint to incite our countrymen to a proper appreciation of their value.

*On some Diseases of Women admitting of Surgical Treatment.* By ISAAC B. BROWN, F.R.C.S., Surgeon Accoucheur to St. Mary's Hospital, &c., &c. Illustrated by 24 wood cuts. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 276. (For sale by T. Richards & Son.)

This work fills an important gap in English medical literature, and cannot fail to be well received in this country. The author treats of Ruptured Perineum, Prolapse of the Vagina, Prolapse of the Uterus, Vesico-vaginal Fistula, Lacerated Vagina, Polypus of the Uterus, Stone in the female bladder, Vascular tumor of the meatus urinarius, Imperforate hymen, Encysted tumor of the labia, Diseases of the Rectum resulting from certain conditions of the uterus, and ovarian dropsy. We cheerfully commend it to our readers.



*The Principles of Surgery.* By JAMES MILLER, F.R.S.E., &c., &c. 4th American edition, from the 3d and revised English edition. Illustrated by 240 engravings on wood. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 689. (For sale by T. Richards & Son.)

Prof. Miller's works on Surgery are so generally known and appreciated in the United States, that it is barely necessary to state this is an improved edition of his "Principles," to secure for this book an extensive sale. It is reproduced in the best style of the distinguished publishers.

*The Principles and Practice of Ophthalmic Medicine and Surgery.* By T. WHARTON JONES, F.R.S., Professor of Ophthalmic Medicine and Surgery in the University of London, &c., &c. With 110 illustrations. 2d American edition, from the 2d and revised London edition. Philadelphia: Blanchard & Lea. 1856. 12mo., pp. 500. (For sale by T. Richards & Son.)

This is a capital manual, already favorably known by its former edition, published under the supervision of Dr. Hays. It will answer the purposes of a text-book for students, who cannot be expected to study the more elaborate works on this subject.

*Manual of Chemical Physiology.* From the German of Professor C. G. LEHMANN, M. D. Translated, with notes and additions, by J. C. MORRIS, M.D.; with an introductory essay on Vital Force, by SAM'L JACKSON, M.D., &c., &c. Illustrated with 40 wood cuts. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 331.

This work, after general considerations on the Human organism and its forces, treats of Zoo-chemistry, or of the nature of the organic substrata of the animal organism; of Phlegmato-chemistry, or the science of the animal fluids: of Histo-chemistry, or the science of the animal tissues; and of Zoo-chemical processes, or the forces and laws of the organic movements—followed by dissertations upon Circulation, Reproduction, &c. It bears the impress of German learning and industry, and is calculated to enlarge very much our views of physiological operations.

*An Analytical Compendium of the various branches of Medical Science, for the use and examination of Students.* By JOHN NEILL, M. D., &c., &c., and F. G. SMITH, M. D., &c., &c.—a new edition, revised and improved, with 374 illustrations. Philadelphia: Blanchard & Lea. 1856. 12mo., pp. 974.

We doubt whether any medical work has met with more ready sale than this epitome. It is remarkably well adapted to the purposes of aspirants for the Doctorate, and although it may enable the lazy and unambitious to substitute a superficial knowledge for what should be more profound, it may be made very useful, even to the well read, as a convenient remembrancer.

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*A Practical Hand-book of Medical Chemistry.* By JOHN E. BOWMAN, F.C.S., Professor in King's College, London. 2d American edition, from the 3d and revised London edition—with illustrations. Philadelphia: Blanchard & Lea. 1855. 12mo., pp. 285.

This is a valuable little work, which we have already had occasion to recommend upon the appearance of the first edition. It contains much useful matter in a small compass, and is therefore well adapted to students and men engaged in active practice.

*Atlas of Cutaneous Diseases.* By J. MOORE NELIGAN, M.R.I.A., &c., &c. Philadelphia: Blanchard & Lea. 1856. 4to.

This atlas is designed as an accompaniment to the author's Treatise on Diseases of the Skin, and must materially assist in the study of this difficult class of affections.

*The "Woman's Hospital" of New York.*

We have before us the first Report of the managers of this humane institution, of which Dr. J. MARION SIMS is the attending surgeon, whose skill in the treatment of Vesico-vaginal fistula is so justly appreciated by the profession. "Seventy-three cases have been received since the opening of the hospital, and twenty of these discharged perfectly cured. All cases now remaining are perfectly curable." This is certainly a very flattering account, and must add to the already extended reputation of the distinguished surgeon, whose indefatigable zeal and industry have enabled him to master an infirmity, until recently deemed incurable. It is but fair, however, to state that vesico-vaginal fistula has been for some years back treated successfully by Jobert of Paris, Mettauer of Virginia, Hayward of Boston, and others.

*The Louisville Review: a bi-monthly Journal of Practical Medicine and Surgery.* Edited by S. D. GROSS, M. D., Professor of Surgery in the University of Louisville, and T. G. RICHARDSON, M. D., Demonstrator of Anatomy in the University of Louisville. Terms: \$3 00 per annum, *in advance*.

We have received the first No. of this work, which takes the place of the Western Journal of Medicine and Surgery, recently discontinued. From present indications the "Review" bids fair to be a valuable acquisition to our periodical medical literature. The well established reputation of its senior editor will doubtless secure to it a liberal patronage.

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*Necrology.*—It becomes our painful duty to record the demise of Dr. RICHARD BANKS, of Gainesville, Ga., who died on the 6th May, in the 62d year of his age. Born in Elbert county in 1794, he was graduated in Philadelphia in 1821, and practiced his profession successfully in his native county until 1832, when he removed to Gainesville. Dr. B. is one of the

first who acquired any distinction in Georgia as a surgeon, and his success was such that he was, by common consent, regarded as the leader of the profession in his section of the State. It is much to be regretted that, being a very plain, unobtrusive man, and averse to writing, he has left no record of his observations and extensive surgical experience.

Dr. JOHN C. WARREN, of Boston, has also paid the last debt of nature at the advanced age of 78 years. At the head of Surgery in New England for half a century, none was more highly esteemed and respected as a member of society and a man of science. His professional enthusiasm was proverbial, and is illustrated in one of the provisions of his will, in which he directs that his body shall be carefully dissected, and his skeleton prepared for preservation in the College Museum. His object in this disposition of his remains was to aid in dispelling the prejudices of the people against the dissection of human bodies.

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*American Medical Association.*—We are indebted to the kindness of Dr. Wm. Brodie, of Detroit, for an early copy of the proceedings of the recent meeting of this body. We regret that we have not room for them in the present number, and must therefore defer them till our next.

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*Disinfection and Preservation of Nitrogenous Manure.* (Read before the National Institute, Dec. 3, 1855, by Dr. D. BREED, U. S. Patent Office.)

Intelligent persons are aware that the poisonous effluvia emanating from gutters, sewers and yard vaults would soon generate a terrible pestilence in any city or town, but for the constant diffusion of the poison. But it may not be so generally known that some of these hot-beds of disease can be easily rendered comparatively harmless and inoffensive. Our affected refinement shrinks from the mention of a disgusting evil which from habit we have come to regard as necessary. Is it not, however, a false delicacy which makes us content to inhale with every breath such pestilential exhalations, and yet forbids a discussion of their properties, origin, or effects, even with a view of reform? Shall we not be more truly refined when one single square of some American city is purified from the stench of night-soil, made ten-fold more intolerable by the ignorance of the scavengers who infest every neighborhood, administering slow poison to us in our sleep, not unfrequently falling victims thereto themselves?

Many years ago the atmosphere of Paris had become so polluted as to excite the most alarming apprehensions as to public health. Attention was directed to the privies as the chief nuisance, and various reformatory plans have been tried, until the united skill of chemists and of practical men has made Paris in this respect a model worthy of imitation. At present complete deodorization and disinfection are accomplished, so that neither scavengers nor others need suffer annoyance. Many other European cities have reformed in this respect, and America has no longer an excuse for neglecting this much needed sanitary reform.

In privy vaults there is a process of putrefaction constantly going forward, and a consequent incessant escape of poisonous gases into the atmos-



phere. Moreover, the fluid portions of the night-soil percolate the earth underlying all our cities. These matters, washed forward by the rains, diffuse the products of putrefaction everywhere; then the heat of summer, by evaporation at the surface, may bring poisonous effluvia up from the whole area of the city. The waters of our wells, as is known, are impregnated with these products. Not long since an intelligent citizen requested me to make a chemical examination of the water of a well which was formerly very good, but was now strongly flavored, and by several persons it was thought to have the taste of a chalybeate water. Upon testing, the water was found to have imbibed rather freely from the privy products of the neighborhood! Such wells are common.

Not only does public health demand that this grievous nuisance should at once be abated, especially as the requisite means are simple and well known, but agriculture seconds this demand, inasmuch as night-soil is valuable as manure, particularly when treated so as to retain all the nitrogen, most of which is liable to escape in the ammonia which is generated during the process of putrefaction. Indeed it contains all the elements derived from the soil by vegetation, and hence is an excellent fertilizer.

The reform in Paris, to which allusion has been made, was effected mainly by the Société d'Agriculture and the Société d'Encouragement pour l'Industrie Nationale, and in the United States we may expect reform from the exertions of agriculturalists rather than from those of sanitary officers.

One general criticism may be applied to the means commonly recommended for disinfecting and deodorizing privies, sewers, and gutters. The methods proposed do not meet all the chemical conditions; they attempt too much with a single reagent. In night-soil many elements occur, forming various compounds, organic and inorganic, some acid, some alkaline or basic, some united as fixed salts, others becoming gaseous, and tending to escape into the atmosphere. Among the gaseous products are sulphydric acid, carbonic acid, ammonia, or carbonate of ammonia, together with various exhalations not yet investigated. But the quantity of some of these is so inconsiderable as to require little attention. Now, in order to completely deodorize and disinfect night-soil, it is necessary to add such different chemical reagents as will unite with each of these gases, converting them into constituents of fixed compounds. But it often happens that a reagent that will fix one gas will expel another. Lime is in common use, because at first it mostly destroys the odor by decomposing the sulphydric acid and forming sulphide of calcium and water,  $\text{H S} + \text{Ca O} = \text{Ca S} + \text{H O}$ . But the sulphide of calcium thus formed is liable to be decomposed by carbonic acid, which is always present in the mass. The lime also fixes the carbonic acid, though the former expels ammonia. Moreover, lime may hasten the oxydation of the nitrogen, forming nitric acid, which latter may either fix ammonia or expel carbonic acid. Thus lime alone cannot be an efficient disinfectant.

Again, sulphate of lime, (plaster,) either calcined or simply pulverulent, is in use. In this case the sulphuric acid unites with the ammonia of the night-soil, and the lime with the carbonic acid,  $\text{N H}_4 \text{ O, C O}_2 + \text{Ca O, S O}_3 = \text{N H}_4 \text{ O, S O}_3 + \text{Ca O, C O}_2$ . The lime also, as before, will decompose the sulphydric acid, but the resulting sulphide of calcium is still liable to decomposition. Calcined plaster itself may evolve sulphydric acid by the simple addition of water, owing to the presence of some sulphide of calcium. Therefore plaster, though better than lime, can never be an

effectual deodorizer. In the play of chemical affinities, when either lime or plaster is used, some of the sulphur must alternately unite with hydrogen and with calcium until it escapes in sulphydric acid at the surface. The employment of bleaching salt (so-called chloride of lime) is very objectionable on account of the chlorine thus evolved, and the consequent impregnation of the air with a poison often more deleterious than the effluvia which it is intended to destroy.

If, instead of lime or its salts, we employ a small portion of the salt of a heavy metal, as sulphate of zinc, iron, or of copper, the sulphydric acid is decomposed, as before, and fixed sulphide of the metal is formed. This sulphide is not decomposable by any substance present. Here, then, we have a complete remedy for sulphydric acid. Sulphate of iron may be the cheapest salt for this purpose, but it, as well as salts of copper, forms a black sulphide, sometimes objectionable on account of the color. The zinc salts, however, form a white sulphide, which can never render a city smutty, however freely used. Of a solution of sulphate of zinc (of 35° to 40° Baumé) it is found necessary to employ only 2 p. c. of the volume of night-soil to decompose all the sulphydric acid, and then lime and its sulphate may be added to neutralize the ammonia and carbonic acid.

Of all the disinfectants and deodorizers hitherto employed no substance produces more remarkable effects than fresh charcoal in a pulvulent state. Its antiputrescent effects were discovered by Lowitz about 1790; but the discovery has been slowly applied. In 1829, Frigerio proposed to employ charcoal for preserving meat, and in 1836 he published in the *Brevet d'Invention* an account of a safe, consisting of a double screen of wire gauze with the interspaces filled with pieces of charcoal. This safe was found to preserve meat in the hottest weather perfectly sweet for a whole week. During many years charcoal has been (especially in Europe) extensively mixed with human excrements, for which purpose it has been found to be admirably adapted, not only by its deodorizing and disinfecting qualities, but also by its being itself a powerful stimulant to the growth of vegetation. The experiments of Dr. Stenhouse, of London, prove that a carcass covered with charcoal powder emits no unpleasant odor during its entire decomposition; that hospital gangrene and other putrid sores are arrested by the use of charcoal. He suggests the use of charcoal air-filters for admission of air to apartments in infected districts, and charcoal respirators for those exposed to infection. He thinks the charcoal decomposes effluvia by simple oxidation, converting their carbon into carbonic acid, their hydrogen into water, and thus hastening decomposition, instead of being antiseptic, as heretofore supposed. The complete success of the charcoal screens used in London clearly indicate the propriety of using charcoal to arrest the contagion of yellow fever. During the recent discussion respecting the burning of bodies, a lady suggested that charcoal be strewn freely into the grave so as to surround the coffin, thus completely preventing the escape of effluvia.

For the last twenty years chemists have been employed in applying their science to the manufacture of poudrette, and in investigating the causes of insalubrity connected with the management of night-soil. These investigations, conducted in different countries, have required such varied experiments that the labor may be regarded as only begun. In the present state of our knowledge we may briefly enumerate the chief emanations from night-soil, with the best disinfectant or corrective known, as follows :

1. Sulphydric acid; sulphate of zinc or of iron, (vitriol solution.) 2. Carbonate of ammonia; sulphate of lime, (powdered plaster.) 3. Free carbonic acid; lime, (quick or slacked.) 4. Putrid exhalations, (not investigated;) charcoal, (better fresh and powdered.) Only a very small portion of vitriol solution is necessary at one time, and this should be so sprinkled over the mass as to meet the gases rising to the surface. Plaster, lime, and charcoal may be used more freely; yet a small portion of these, if frequently strewed upon the surface, will be sufficient. It has been suggested that the disinfectant be supplied, as water is, from a reservoir, by simply turning a faucet.

In the manufacture of poudrette the chief objects are, first, to preserve all the fertilizing matter of night-soil; and, secondly, to expel the excess of water, amounting in some instances to nine-tenths of the whole volume, (ordinary excrements when fresh are four-fifths water.) An excellent method of accomplishing these objects is to mix thoroughly with the night-soil a solution of sulphate of zinc, and leave at rest for a time, when the watery portion may be pumped off and allowed to flow into a sewer or gutter, (Paris Medical Police,) without forming a nuisance. It may be well to allow a small jet of solution of sulphate of zinc to mix with the stream (Messrs. Quesney) as it issues from the pump. The disinfected residue in the vault may now be removed, spread in thin layers on a resin or other water-tight floor, (A. Wallet,) and allowed to evaporate to dryness under an open shed or by furnace heat. The poudrette has been sometimes pressed in cubical masses, pierced with holes, to promote desiccation. Thus prepared, it requires no packing for transportation or preservation. A little rain will do it no harm if the wet surface be immediately dusted with plaster. Poulet has recommended the employment of an emulsion of oil and alkalies in connexion with the zinc salts, in order to obtain a clearer liquid to pump off.

But a better method is recommended by Susser & Fouchet, Lepelletier, (Moniteur Industriel,) by which all the mineral and organic matters are entrapped in a gelatinous precipitate of silica. This process is employed after the ammonia salts have been fixed. An abundance of silicate of soda is mixed with the night-soil, and then sulphuric or some other strong acid is added to precipitate the silica.  $\text{Na O, Si O}_2 \text{--} \text{SO}^3 = \text{Na O, SO}^3 \text{--} \text{Si O}_2$ . The silicate of soda is very cheaply prepared by heating in a furnace a mixture of common salt and sand:  $\text{Na Cl--Si O}_2 = \text{Na O, Si O}_2 \text{--} \text{Cl}$ . As the refuse zinc salt may be employed for artificial manure, Gaultier de Claubry has suggested that the extensive utilization of such refuse in this way may so reduce the expense of operating the galvanic battery as to introduce it as a common power apparatus.

In Paris it was found that one man with a horse would manufacture, in the old way, with plaster and coal, 25 tons of poudrette per day, and that the entire cost of manufacture amounted to only \$1 87 per ton. According to chemical analysis the nitrogen in night-soil is 13 per cent. of the dry matter. Now, the best Peruvian guano contains only 14 per cent. of nitrogen, whilst the average quality contains but 6 or 7 per cent. Therefore poudrette, properly prepared, will be nearly as valuable as the best Peruvian guano, and of twice the value of the average. The experience of farmers sustains the results of analysis.

The nitrogen in urine is from 25 to 33 per cent. of the solid matter. A manure prepared from urine, and sold under the name of urate, is a most powerful fertilizer, equal to four times its weight of average guano, or twice the value of best Peruvian.



In the various processes of manufacturing poudrette it is too often forgotten that the night-soil should be treated before the urine is decomposed. The urine is much richer than the feces in nitrogen. The nitrogen in urine is found chiefly in that remarkable compound denominated *urea*, which forms white prismatic crystals, quite inodorous. Urea contains two atoms of nitrogen, two of carbon, four of hydrogen, and two of oxygen, and its formula, deduced from its ultimate analysis, would give,  $N_2 \cdot C_2 \cdot H_4 \cdot O_2$ . But organic chemistry regards such a formula empirical, and groups these elements according to their products of decomposition, and the compound which may be formed by a part or all of them with oxygen or with the halogens, by substitution or otherwise.

The true constitution of urea is expressed by the following formula:— $(N C_2 H, O_2) \frown N H_3$ ; it is therefore urenoxyd-ammonia. Now, this urea is rapidly decomposed even at ordinary temperatures, and its elements, with two atoms of water, form two atoms of ammonia and two of carbonic acid,  $(N C_2 H, O_2) \frown N H_3 -|- 2 H O = 2 N H_3 -|- 2 C O_2$ . Both of these products are volatile, and therefore, if urine be allowed to decompose, the most valuable constituents for manure are lost in the atmosphere.

In estimating guano the nitrogen is the true standard of value. Estimating night-soil in the same manner, and assuming that we preserve all the nitrogen, the city of New York and environs would afford manure equal in value to 51,000 tons of best Peruvian guano, or \$2,550,000 per annum. During the last seven years, according to the Report of the Patent Office for 1854, the United States has imported on an average 45,869 tons of guano annually. Much of this guano is worthless, being so when first obtained, or having been washed in order to manufacture ammoniacal salts for sale. The practice of washing guano is a common trick of trade, and usually a safe one, since farmers never employ a chemist, and washed guano can be bought at a comparatively low price. But even estimating all the imported guano as equal to the best Peruvian, worth \$50 per ton, it would amount to but \$2,293,450, which is less by \$256,550 than the value of the night-soil of the city of New York, as above estimated. Great Britain has imported on an average during the last seven years 138,496 tons of guano per annum, which, at \$50 per ton, amounts to \$6,924,800. The night-soil of London and environs would yield annually nitrogen corresponding to 120,000 tons of best Peruvian guano, and would doubtless exceed the amount of nitrogen imported. As long ago as 1834 it was estimated that London wasted manure (principally night-soil in the Thames) to the amount of \$2,000,000 per annum. How much London or New York now wastes I am not informed; but all will agree that public health and the interests of agriculture most earnestly demand a thorough sanitary reform in all our cities and towns.—[*National Intelligencer*.

*Alexis St. Martin*.—We were gratified a few evenings since, in company with a number of medical gentlemen, by a sight of the veritable individual who was many years ago the subject of the experiments of the late Dr. Beaumont, on digestion, and whose name has become so identified with them in all works on that subject in every part of the world. He is a Canadian by birth, a man of about medium height, of dark complexion, and rather hard features, now 52 years old, and bearing his age remarkably well. He is a laborer by occupation, and never a soldier as has been supposed; and at the time of the accident which ended in making his name so fami-

liar to the scientific world, was in the employ of the Hudson Bay Company. The injury was produced by the accidental discharge of a gun, which carried away a part of some of the ribs, and made an opening into the stomach on the left side, and was so severe in its character as to threaten to prove speedily fatal. There is now a fistulous opening, oblong in shape, about an inch and a half in its longest, and three-quarters of an inch in its shortest diameter, nearly in a line with, and about four inches below the nipple, and between two and three inches from the cardiac orifice. It occurred in 1822; and since the experiments of Dr. Beaumont, St. Martin has enjoyed uninterruptedly good health, and has supported a large family by manual labor. He is now under the care of Dr. Bunting, an English surgeon, who has made provision for the support of his family, and who proposes to take him to Europe, where, we trust, he will be made the subject of more extensive, more varied, and more accurate experiments than heretofore. We also saw him again at the New York Hospital, where a few experiments were tried, such as introducing a thermometer within the stomach, &c. We understand Dr. B. proposes to make him the subject of a public lecture, for the purpose of realizing something for his benefit. We trust that the opportunity of his presence among us will be improved for purposes of science, and that something will also be accomplished towards relieving him from the necessity of returning to manual labor.—[*N. Y. Med. Times.*

*A new view of the Law with reference to patent nostrums.*—The following documents, taken from the New York Journal of Medicine, will sufficiently explain themselves:

BUFFALO, March, 1856.

Dear Sir:—Will you do me the personal favor to furnish me with a written statement of your views on the subject of copyrights for labels, etc. as expressed to me in a conversation yesterday.

Coming from a gentleman of your rank and position, I am certain that they would possess interest; and I would like to give them publicity through some of our Medical Journals.

Sincerely wishing that the public had many more such faithful servants,  
I remain yours truly,

AURELIAN CONKLING, Esq.

FRANK H. HAMILTON.

DISTRICT COURT OF THE UNITED STATES FOR  
THE NORTHERN DISTRICT OF NEW YORK, }  
CLERK'S OFFICE, }

BUFFALO, March 18th, 1856.

Dear Sir:—I am much obliged for the interest manifested by you in the subject with which I lately troubled you; and although it is probable that in your politeness you over-estimate the importance of the views expressed to you, and of those contained in my letter to the Hon. S. G. Haven, still it is possible that they may be useful to others, and I therefore will proceed to repeat them here, for such use as you may deem expedient. I am much pleased with the polite interest you manifest in the subject under consideration, because, I regret to say, I have heretofore experienced very different treatment from some persons who have found their way into your profession, and who not only so far forgot their professional obligations, as to manufacture nostrums, but were also guilty of low abuse of an officer

whose sense of duty would not admit of his being made instrumental, improperly, in imposing their mixtures upon the public.

The immediate purpose of my letter to our representative in Congress, was to invoke the attention of the Department of State to what it seems to me is a great abuse and perversion of the provisions of law in relation to *copyrights*. The subject of copyrights is under the general supervision and control of the State Department of the United States; and officers who have subordinate duties to perform must, to some extent, be subject to directions and instructions from that department. Applications are frequently made to me, to record, under the provisions of law above alluded to, labels of medicines, compounds and mixtures, of different grades of pretension, from an "elixir of life" or a "diarrhœa cordial," to a hair-dye or a corn-salve.

Upon the occurrence of the first application of this sort, a number of years ago, being asked my reasons for refusing to treat the subject as one embraced in the provisions of the act, entitled "An Act to amend the several acts respecting copyrights," I made the following reply, a recital, in part of which, will express the views which have ever since governed me, upon the subject:

"I am sorry that my views of the Act of Congress, above mentioned, are such as to interfere with your interests or wishes. It is not the province of the Clerk of the District Court to 'grant' anything. His duties are ministerial, and upon the subject of copyrights he is bound to do what he is directed to do, by the Act of Congress.

If I should record the *label* sent by you, and should send you a certificate of the fact, I would thereby 'grant' you nothing, nor would you gain anything, unless the act of Congress embraces such a subject.

I have examined, with considerable care, the Act of Congress above mentioned, and I will state some of my views upon it; from which you will infer that I do not think proper to record a *label* under that Act.

My opinion is, that the 'map, chart, musical composition, print, cut, or engraving,' must have a value as such, and be intended for sale as such; that, whichever it may be, print, cut, or engraving, *it* must have a *title* applicable to itself, which title is to be recorded.

I am also of the opinion, that the Act of Congress was designed to promote the acquisition and diffusion of knowledge, and to encourage the production and publication of works of art, the general purpose being to advance the people in civilization and refinement.

I think, furthermore, that, by the act to which I have referred, Congress did not intend to prevent the imitations of the stamps and labels of any manufactured article, or goods, or merchandise. That is a subject of such extensive interest and importance, that, if it had been the intention of Congress, to embrace it in the provisions of the law, that intention would have been distinctly and unequivocally manifested. It is not likely, however, that such a provision by Congress will ever be found so much out of place, as it would be in 'An Act to amend the several Acts respecting *copyrights*.'

Furthermore, I am quite certain that Congress did not intend that this Act should be so prostituted, as to be made instrumental in deluding the ignorant and inconsiderate, into the purchase and use of the various nostrums, catholicons and panaceas, which are so much worse than useless to the community.



It is the practice, I am informed, in many of the Judicial Districts, to make records of such labels as are above mentioned, and I suppose it is done to avoid the trouble and ill-will engendered by a refusal. It is entirely clear, however, that such a practice is not in accordance with the intention and design of the Act of Congress above mentioned; and I have no doubt that if the mischiefs of the practice were realized, it would be discontinued.

The course of proceeding above mentioned is that by which almost the whole number of the miscalled "patent medicines" are brought forth. It would seem to be unnecessary to state, that there is no force or validity whatever in this proceeding, for such pretended purpose.

There are means provided in the Patent Laws, for securing to any individual the exclusive right to "any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement on any art, machine, manufacture, or composition of matter," which he may invent; and the necessary requirements in order to accomplish the purposes are clearly and definitively prescribed, as follows:—"But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable a person skilled in the art or science to which it pertains, or with which it is most nearly connected, to make, construct, and use the same."

The Act also provides that the inventor shall accompany his application "with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention or discovery is of a composition of matter." The Act also provides, that the applicant shall make oath, that he does not know or believe that the composition of matter was ever before known or used. These and the other requirements of the law being complied with, provision is made for a critical examination into the merits and character of the alleged invention; and, "if the commissioners shall deem it to be sufficiently useful and important, it shall be his duty to issue a patent therefor." This, it will be perceived, is a very different course of procedure from that of filing a label in the clerk's office; and a label, not even indicative of the character of the compound it is to cover. The law it will be perceived, provides for a truthful statement of the ingredients and proportions of every patented compound. The purpose and effect of the provision are two-fold. In the first place, the means are afforded for an intelligent and careful examination into the compound, in order to determine whether it is worthy of the countenance of the government; and, secondly, after the termination of the duration of the privileges, secured by the letters-patent, the necessary knowledge is at hand, to make the invention directly available to the public, by furnishing to all, a knowledge of its ingredients and mode of preparation. Moreover the "letters-patent" themselves, in accordance with their true purport, contain a plain statement of these particulars. There is something *open* in these requirements, and in the whole course of proceeding marked out in relation to patents, and the fact is, just as one would suppose, that there are really very few "patent medicines." The medicines sold as such, are, nearly all of them utterly destitute of any real basis for the pretense under which they are imposed upon the public.

If the practice of recording labels of medicines should be discontinued,

in the clerk's offices, one important step will be taken towards clearing away the delusion which prevails upon the subject. And if your profession, with that true regard for the general public good which characterizes its *worthy* members, will take the subject in hand, I have no doubt that you can obtain the enactment of penalties against the sale of any medicines under the pretense that they are, when, in truth, they are not, patent medicines. There has been legislation to prevent the adulteration of medicines; but, it seems to me, that it is a more important end to shield the people against the miserable mixtures, which, as things are now managed, are, by the apparent encouragement of the government imposed upon them. I regret, Dear Sir, that this letter has necessarily been so hasty; I do not mean, however, to intimate that its positions are not deliberately taken.

Very respectfully, your obedient servant,

Dr. FRANK H. HAMILTON.

AURELIAN CONKLING.

### CIRCULAR.

DEPARTMENT OF STATE,  
WASHINGTON, April 11, 1856.

Mr. ———, *Clerk of the District Court of the United States:*

Sir—The Act of Congress approved February 3, 1831, entitled "An Act to amend the several Acts respecting copyrights," is "An Act for the ENCOURAGEMENT OF LEARNING, by securing the copies of maps, charts, and books, etc.. to the authors and proprietors of such copies;" and, inasmuch as mere LABELS are not comprehended within the meaning of said Act, you will, for the future, refuse, in all cases, to record or issue a certificate for the same under said Act.

I am, Sir, very respectfully, your obedient servant,

W. L. MARCY.

*The Influence of Occupation on Mortality.*—The attempts hitherto made to determine the influence of professions on health are greatly reduced in value, in consequence of the inadequate data on which they are based. If Ramazzini and Thackrah could have known the facts of the last Census, the observations resulting from their scientific and benevolent labors would have had the authority of natural law. That Census sheds the light of statistical truth on the relation of professions and occupations to mortality, and brings out truths which no less extensive investigation would enable the most sagacious observer to anticipate.

It will be an incalculable advantage to obtain, by means of the next Census, a scientific deduction as to the effect of each kind of occupation on mortality. As the initial step has been taken, we may expect it will be followed by others, in a path which, if beset with difficulties, cannot be traversed without leading to the most important and beneficial discoveries.

The last Census Report gave the number of persons in each occupation in 1851, and the Fourteenth Annual Report of the Registrar-General shows the numbers in those occupations dying at corresponding ages. In this early attempt to arrive at the ratio of occupation to the rate of mortality, it has been found that a difficulty arises from the want of definition of the various occupations, sufficiently clear and determined—a difficulty which can be overcome by giving more detail to future Census operations. It is, for example, found impossible to distinguish the rate of mortality among the different classes engaged in the manufacture of silk, of cotton, of linen,

and of woollen, as great numbers of them are grouped together under the designation of "Weavers." "Miners," whether in lead, iron, copper, or coal mines, fall under one general designation; and "Laborers," in the field, or railways, in quarries, and on the roads, are not distinguished from each other in the registers.

Still, there are certain occupations sufficiently defined to obviate all danger of their being confounded, and whose rate of mortality can now be recorded with certainty. We give these classes at the decennial period, ranging from 45 to 55,\* as arranged in a Table (XVIII.) which shows the advancing rate of mortality in twelve occupations.

1. *Farmers*.—Of the twelve classes under consideration, Farmers are the longest livers, their rate of mortality being not quite 12 in 1000 (11·99). The number of English farmers of all ages in 1851, including 2429 graziers, was 225,747, of whom there were 53,608 between the age of 45 and 55. In that year, the total number of deaths among farmers of all ages was 6426, very much below the numbers which would have been registered had these individuals been engaged in other pursuits. These facts prove that the pure air, the daily exercise, the substantial fare, and the other aids to health enjoyed by this substantial class, considerably modify the influence of unfavorable weather, bad seasons, open ports, peculiar burdens on hand, and all the other ruinous things which farmers' friends have been accustomed to depict in such gloomy colors.

2. *Shoemakers* hold the next place to farmers, their rate of mortality between 45 and 55 being 15·03 in 1000. They are followed by—

|                       |           |                |
|-----------------------|-----------|----------------|
| 3. <i>Weavers</i>     | - - - - - | 15·37 in 1000. |
| 4. <i>Grocers</i>     | - - - - - | 15·79 "        |
| 5. <i>Blacksmiths</i> | - - - - - | 16·51 "        |
| 6. <i>Carpenters</i>  | - - - - - | 16·67 "        |
| 7. <i>Tailors</i>     | - - - - - | 16·74 "        |
| 8. <i>Laborers</i>    | - - - - - | 17·30 "        |

As will be seen on inspection, there is among these seven occupations a gradual increase in the rate of mortality, which, considering their great diversity, is quite remarkable. The near approach of these occupations to each other in the scale of mortality, arises from the circumstance that they have peculiar dangers which tend to counterbalance each other. Thus it is to be noticed, that "the tailor is not exposed to the explosions which are fatal to the miner, and the laborer has exercise which is denied to the tailor."

Ascending this scale of danger we pass to—

|                       |           |                |
|-----------------------|-----------|----------------|
| 9. <i>Miners</i>      | - - - - - | 20·15 in 1000. |
| 10. <i>Bakers</i>     | - - - - - | 21·21 "        |
| 11. <i>Butchers</i>   | - - - - - | 23·10 "        |
| 12. <i>Innkeepers</i> | - - - - - | 28·34 "        |

A great disparity is observable in passing from laborers into the class of miners, telling a tale of dangers, many of which result from criminal neglect. Between laborers and the last four classes in this table there is a most remarkable hiatus. In the classes previously noticed, the difference in no case is more than one in a thousand, and in some instances less. Here the difference begins with three, and mounts up to nine, in a thousand.

\* The decade from 45 to 55 is the only age to which the Census Returns have been applied in the Fourteenth Annual Report of the Registrar-General. We shall have still more important results when these returns are applied to earlier ages.



The returns show that the highest rates of mortality are found among the butchers (23·10 in 1000), and the class of Innkeepers and licensed victuallers (28·34 in 1000.)

The extraordinary mortality of butchers is a fact for which we are indebted wholly to the last Census. The "red-injected face" of the butcher, has produced a wrong idea as to the healthy nature of his occupation. This idea is now corrected by scientific induction, and proper sanitary means will overcome the evil thus brought to light. To quote the significant remarks in the report conveying this fact, here is an important problem for solution: "On what does the great mortality of the butcher depend? On his diet, into which too much animal food, and too little fruit and vegetables enter? on his drinking to excess? on his exposure to heat and cold? or, which is probably the most powerful cause, on the elements of decaying matter by which he is surrounded in his slaughter-house and its vicinity?"

If the rate of mortality among innkeepers, licensed victuallers, and beer-shop keepers should be seized with avidity by the advocates of teetotalism, they must not be forbidden its use; at the same time they must be reminded, that "many highly respectable men of this class lead regular lives, and are of steady habits; but others, exposed by their business to unusual temptations, live intemperately and enjoy less quiet at night than the rest of the community. They are exposed also to zymotic diseases, by intercourse with large numbers of people."

Startling and painful as are these disclosures, they cannot be too widely published. They have a practical value among those who deal with the average of life, for commercial or benevolent purposes; while, to those more specially concerned, they show the necessity, for their own safety, of employing the measures by which unnecessary disease and premature death may be obviated.—[*Med. Times and Gazette*.]

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*Prize Essay on Cholera Infantum*.—The successful essayist for the prize of \$100, offered by the New York Academy of Medicine, for the best paper on Cholera Infantum, was James Stewart, M. D., of this city, author of the popular work on the Diseases of Children. Dr. Stewart, in acknowledging the award, generously directed that the sum be paid to the Treasurer of the Children's Nursery.—[*N. Y. Jour. of Med.*]

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*Cæsarean Section*.—Dr. D. F. Owen reports (*Charleston Medical Journal*, March, 1856) a case in which the Cæsarean section was performed by Dr. W. H. Merinar, of Miss., for the third time on the same individual. A living male child was extracted. The mother died on the fifth day after the operation.—[*Ibid.*]

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*Manuscript of the Elder Pliny*.—Dr. F. Mohl, Professor at the University of Heidelberg, is stated to have discovered in the Monastery of St. Paul, in Corinth, a manuscript of the elder Pliny, containing nearly the whole of the seventh part of the Natural History, lib. 11 to 14.—[*Charleston Med. Journal*.]

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## ORIGINAL AND ECLECTIC.

### ARTICLE XVIII.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

### LETTER NO. 12.

MONTGOMERY, ALA., April 28th, 1856.

*Messrs. Editors*—Having dwelt at sufficient length upon the general pathological conditions which usually belong to, and distinguish the more malignant diseases in the South, I may be permitted in a few words to recapitulate some of the leading practical points for which I have contended—namely, that they are of different character, and require different treatment from the same diseases, as they usually appear in other and more northern latitudes. That for the production of *any given* disease, the same general cause, or set of causes, are required, and the disease thus produced in its simple elementary or typical character, will be the same, at all times, and in all places, and that the difference in their character, their modifications, and complications, as observed in different localities, depend, *not* upon the cause which produces them, but upon causes which have acted antecedently, or conjointly, or which have been superadded to the *exciting cause*. Hence an intermittent fever, a pneumonia, or a dysentery, will require for their production the same general causes in Boston, Philadelphia, Montgomery and New Orleans. But from the influence of climate, the long-continued action of high ranges of atmospheric

heat, and other causes, which tend to produce nervous depression, and to derange the functions of the liver and other organs, which stand in immediate or intimate relation to it, these diseases will assume very different characters and present very different aspects in Montgomery or New Orleans, from the same diseases in Philadelphia or Boston, and will require a corresponding modification of treatment; and so of all other diseases.

Dr. Wood, of Philadelphia, has stated that he never saw a case of malignant, or pernicious intermittent, or remittent fever, except in the hospital, among sailors recently from the *southern coast*, or among medical students from the *South* or *south-western states*; yet he has, no doubt, seen many cases of simple intermittent and remittent fever. And the reason is, that in Philadelphia, though sufficient cause may exist to produce a simple intermittent, there is an absence or want of the causes necessary to create a predisposition to malignancy in them; and our southern students and sailors having been long subjected to the influence of causes which tend to impair the general *vigour* of the system, and create a predisposition to the condition of depression and congestion, when exposed to the influence of the causes which, in Philadelphia, produce *only* simple intermittents, have developed in them the most malignant and complicated forms of the disease.

The causes of malignancy in these diseases are little less observable in the influence of seasons, than in climate and latitude, as the milder and more simple forms of the spring season may be perceived gradually to change, as the season advances, to those of a more violent and complex character, until the fall season, when they reach their greatest malignancy. Such is the course of these malarious affections, in our southern latitudes, when uninfluenced by the prevalence of epidemic causes, to which they are at all times liable.

Now, I will not attempt to decide the question, whether the greater malignancy of these affections depend upon the greater degree of concentration and virulence of the malarial poison, which is supposed to produce them, or upon the causes, which are necessary to generate the poison, acting *directly* upon the animal system, in conjunction with the poison, impairing its tone and vigor, thus laying the foundation for, or creating a predisposition to, the condition of depression and congestion, which, with the functional derangement of the liver, consequent upon the same causes, deter-



mine their greater malignancy. Reason and observation incline to the latter conclusion; for if we take the case of the sailors and medical students, coming from the *South*, in Philadelphia, we see the malignant forms of disease excited in them by causes, which in others (where no such predisposition existed) could excite only the milder form of the disease. Now, if it should be contended that these cases, and similar ones, such as our pneumonias, dysenteries, and other like diseases, which occur in the fall, winter and spring, derive their malignancy from the presence of malarial poison in the system, I would reply, that it is not reasonable to suppose that a poison capable of producing such terrible results, could lie dormant in the system for weeks, and even months, without manifesting some signs of its presence, and then, under the influence of some slight exciting cause, develop all its pent-up fury. The laws of physiological chemistry would forbid such a thing, as the poison would, ere long, be eliminated from the system, or shorn of its virulence. The more reasonable hypothesis is, that the character of all these affections is determined by the predisposing and not the exciting causes, but that they acquire force from each other, in the manner which has already been explained. To place this matter in a stronger light, I will suppose two men, equal in general respects, one taken from the hills of New Hampshire, and the other from the bayous of Louisiana, to be inoculated with small-pox virus, taken from the *same* subject at the *same* time; it would be but reasonable to suppose, (believing that *all* diseases, in a malarial region, are subject to the influence of the causes which produce malaria,) that whatever differences might exist in the character of the two cases would depend upon the influence of climate, and not upon any difference in the nature of the exciting cause. In both cases, small-pox, in its suigeneric character, would be the result; but the probabilities are, that the New Hampshire man would have a highly inflammatory form of the disease, without complications, and would require antiphlogistic and sedative treatment—while the Louisiana man would have a low congestive form, attended with biliary and other complications, and require the use of stimuli and tonics. Apply the same argument to the cause, whatever it may be, which produces yellow fever. We hear it asserted, and it is generally believed, that the character of yellow fever is mild or malignant, according to the virulence of the cause which produces it. Is this proposition true? I am

willing to admit, that the cause which produces yellow fever may be generated in much greater abundance, and affect a much greater number of persons at some times, and under some circumstances, than it does at others; and though it is a malignant and fatal disease in its tendencies, at all times, it sometimes becomes much more so. But I am not prepared to admit that these results depend upon the more concentrated and virulent character of the poison, whatever it may be, which produces it, but my position is this: that yellow fever possesses an *essential typical* and *suigeneric character*, having for its production the operation of a *specific cause*, which, like the causes which produce small-pox, measles, or scarlatina, can only produce them in their simple, essential or suigeneric character, in which, if divested of all adventitious or extrinsic causes and influences, they would universally be the same. But as such a thing would be impossible with respect to yellow fever, and not much less with the others, I am compelled to believe that the different forms and modifications which yellow fever assumes, depends upon the adventitious influences which surround it, and not upon the cause which produces it. The most common and universal of these are such as relate to the person, and which modifies the disease to some extent in each individual case, independently of the influences which determine the general character of the disease.

All diseases are subject to the influence of these *individual predisposing causes*, and none exhibit their influence in a more marked degree, or show so clearly their modifying influence, *independently* of the action of the *specific* or exciting cause, as does scarlatina, it being not unfrequently the case that we observe in the same family, and even in the same room, and at the same time, almost all grades of the disease, from the mildest and most simple, to the gravest and most malignant forms. Now, it cannot be contended, even upon the slender foundation of a probability, that the greater malignancy of these cases depends upon the greater virulence of the exciting cause; and even if they should all be of that character, it would furnish no conclusive evidence that the *exciting cause* was more virulent, but that the extrinsic and modifying influences were more potent and active.

However interesting and important, in a practical point of view, may be the enquiry into the nature of the *specific causes* of disease, and the *individual predisposing causes* which modify them, I am

admonished, that to avoid the charge of indulging too freely in etiological speculations, abstractions and subtleties, it is proper that I should follow out my original design of endeavoring to point out the peculiar modifications and complications of our southern diseases, which *result* from the operation and influence of *general predisposing causes*, and of urging upon southern practitioners, the absolute necessity of watching carefully the changes which from time to time they undergo, and of conforming their practice to the general pathological condition which *exists*, modifying it to suit the exigencies of each case.

In describing these diseases, I shall not follow the plan which has usually been adopted by systematic writers, of giving in regular detail, all the causes, symptoms, and distinctive features—the modes of treatment and prevention—their terminations, &c., &c., which make up their complete history in their simple elementary or typical character, presuming that every physician is familiar with them in that character, which, as I have before stated, is universally the same, when not modified by adventitious influences; but shall describe them only in their modified and complicated forms, according to their general pathological character, and the classification which I have adopted, observing, however, according to the relation of these diseases, the order of arrangement adopted by the systematic writers generally. The first which come up in that order, are—

*Intermittent and Remittent Fevers.*—My reason for coupling these two diseases, is, that they possess no appreciable pathological distinctions which entitle them to a separate consideration: they result from the operation of the same causes, though perhaps from different degrees of intensity—are subject to the same modifications and complications, and in many instances assimilate each other so closely that it is a difficult matter to draw a distinction between them; especially is it so with respect to those of the quotidian and the double tertian types, which may be said to include all their malignant forms and varieties, whether it be their original type, or whether they may have changed to one or the other of those types during their progress. It will not be amiss to include, with these the double quotidian; but this type is of comparatively rare occurrence, except in the diseases of children; and so far as any modification of treatment would depend upon the distinction,



whether in a child or an adult, it would matter little whether it be classed as intermittent or remittent. When the *intervals* extend beyond the types, the similitude between intermittent and remittent fever in a great measure ceases, and I doubt very much whether there is such a thing as a remittent fever of the tertian, much less of the quartan types; and when these fevers, with long intervals, assume a malignant cast, (which is not often the case,) it is generally the result of individual predispositions, or of some controlling epidemic influence.

Now, with respect to the type of these diseases, and the periodic character of all malarial diseases, it is necessary that I should say something, for the reason, that a knowledge of this peculiar phenomenon, not only enables us to understand them better in their true, essential character, as well as in their modified and complex forms, and also the source from which they spring, but also enables us to treat them with a certainty of success which could never be attained without such knowledge; and I feel very certain that success often depends as much upon the *timely* application or administration of a remedy, as it does upon the nature and the therapeutic property of the remedy itself. Hence I would insist that no practitioner in the South, however skilled he may be in the treatment of malarial diseases, can be too well versed in a knowledge of the laws of their periodicity, which is the key to success, whether in the treatment of the milder and more simple, or in warding off and combating the more malignant and complex grades.

In noticing this phenomenon of periodicity, I shall not presume to attempt, what so many wiser heads have failed in, to give a *satisfactory* explanation of its cause. Having, however, an idea with regard to its nature, it cannot be regarded an act of temerity in me to express it, which is this: that while the general system is known to be governed by the laws of periodicity in the performance of many of the vital functions, as observed in gestation, menstruation, &c., which periods are but the multiplication of a certain number of shorter, or diurnal periods, the brain, and animal portion of the nervous system, under the influence of diurnal revolutions, and of sleeping and waking, is seen to alternate between a state of activity and repose, whereby it becomes reinvigorated—while the organic portion of the nervous system, though often excited, never acquires less than a passive state of activity,

as the laws of vital action forbid a state of perfect rest. Hence it is, that in non-malarial regions all diseases may show certain signs of periodicity, during the twenty-four hours of a paroxysm, marked usually by an *increase* of excitement, while in malarial regions the periodicity will be marked by the signs of depression: hence, I infer that the cause of such periodicity as belongs to non-malarial diseases, should be ascribed, in most part, to the influence of diurnal revolution, with, perhaps, some degree of reinvigoration of the animal nervous system, while the periodicity of malarial diseases should be ascribed to the depressing influences of malaria upon the organic nervous system, and the influence of diurnal revolutions combined. Now, if this explanation is not more satisfactory than the hundred others which have been given, it is at least in conformity with what I have said on a former occasion, namely, that malaria, the supposed product of heat, moisture, and decomposing vegetable matter, acted chiefly upon the organic nervous system, producing diseases whose most prominent characteristic is periodicity; and that the non-malarial, or those which were produced from epidemic influences, animal effluvia, and other causes, which act manifestly with more force upon the brain and animal nervous system, exhibited none of the signs of periodicity, unless they were combined with strong malarial influences, under which they sometimes lose their essential saugeneric character.

To pursue the subject of the particular types of intermittent and remittent fevers, of which there are three single, three double, and a number of complex, which are not necessary for me here to enumerate. The single types are the quotidian, the tertian, and the quartan—having, respectively, intervals of twenty-four, forty-eight, and seventy-two hours, from the commencement of one attack or paroxysm, to the commencement of another, according to the type; the quotidian occurring every day, about the same hour; the tertian occurring every other day, about the same hour, and the quartan occurring every fourth day, or at intervals of every seventy-two hours. The double quotidian has two paroxysms in twenty-four hours, occurring each day about the same hour. The double tertian has a paroxysm each day, occurring one day in the morning, and the next day in the evening, and so on, the paroxysms on alternate days corresponding with each other. The double quartan has a paroxysm on two successive days, none on the the third, and one again on the fourth, and so

on, every seventy-two hours. A feature in these types worthy of note, is, that the longer the interval, the shorter is the paroxysm; and, inversely, the shorter the interval, the longer the paroxysm. Thus, the paroxysm of a quotidian will often occupy eighteen out of the twenty-four hours—a tertian will occupy from ten to twelve, and a quartan from six to eight hours. Another feature worthy of observation, is, that each paroxysm, of whatever type it may be, *if intermittent, will terminate within twenty-four hours*; but if *remittent*, it may go on to twenty-four, thirty-six, forty-eight, sixty, and seventy-two hours, corresponding in its exacerbations and remissions to its *intermittent prototype*. As these types, however, are subject to change, and are more often *obscured* by extrinsic or adventitious influences, without being really changed, and as it is sometimes a matter of the utmost importance to obtain and preserve a knowledge of the true type, much advantage may be gained by ascertaining the time of day when the attack commenced, and watching carefully the duration of the first paroxysm. If, therefore, an attack commences in the morning, and continues for fifteen or eighteen hours, we may safely conclude that it is a quotidian; if the paroxysm commences in the morning or forenoon, and lasts ten or twelve hours, we may infer that it is a tertian, or a double tertian; and if it occurs in the evening, and lasts about the same time, say eight, ten, or twelve hours, we may rely very confidently on its being a double tertian; and if it occurs in the forenoon, and continues only for six or eight hours, we may as certainly depend upon its being a quartan, or other type of long interval. With regard to the triple, quadruple, and other complex types, not being familiar with them in practice, I know of no general rules by which they could be recognized, when *masked* or *obscured*. A knowledge, however, of the *prevailing* type, will aid in arriving at a knowledge of the true type of these *obscured* or *masked* intermittents.

A curious, and not unimportant fact connected with intermittent and remittent fevers, is, that an attack *seldom* or *never* comes on during the hours of the night. This fact may serve to show that the organic nervous system, which is always more active and busy, in proportion, while the animal nervous system is at rest, is better able to resist the depressing influences of malaria at such time, but succumbs more readily to its influence when the animal powers resume their accustomed sway. It may serve to show, also,



that the animal powers are less impressible by the influences of malaria, otherwise they would fall an easy prey to its influence during the hours of their repose, but such, we see, is not the case; and we may safely infer that fevers, which have their accession during the hours of the night, are *not* of malarial origin. But how stands the case, with respect to the action of epidemic influences, animal effluvia, and such other causes as are known to act more decidedly upon the animal nervous system, and whose power it may be able to resist, while in a state of activity, during the day time, but to which it falls an easy prey at night, when in a state of rest. Take yellow fever, for example, which we suppose to be the product of a specific animal effluvium, and we see that the attacks of a large proportion, if not a majority of those cases which are more clearly defined in their essential typical or typhoid character, take place during the hours of night, while those which occur during the day, often afford unequivocal evidences of a malarial influence from their manifest tendency to assume the character of periodicity. These facts, if such they are admitted to be, lend support to my ideas with regard to the periodicity of disease, and leads us to the inference, at least, that malaria, though it may modify, has no positive agency in the production of yellow fever, in its essential typical or typhoid character.

But, finding myself digressing, and handling a subject which perhaps should have been reserved for a more appropriate occasion, I will conclude my remarks upon the periodicity of disease, by relating the particulars of a case, which will tell, in stronger terms than words could express it, the importance and necessity of a proper knowledge of the types of periodic diseases, and the danger which often results from a want of such knowledge, as occurred in the case which I am about to relate.

Miss —, a young lady about 17 or 18 years of age, of prepossessing manners, possessed of intelligence and a remarkably fine flow of spirits, and in the full enjoyment of health, beauty and loveliness, was attacked on the 10th January last with a slight chill and fever, for which her parents gave her a little blue mass and quinine, and she had no return of it. But from that day, to the time when I was called to see her, which was on the 25th of February, her health gradually, but very perceptibly, declined; the rose left her cheeks and the coral her lips, and she now presented a perfect specimen of anæmia, or leucocythemia, having rather the appearance of bleached wax, than of flesh and blood. At this time I obtained the particulars of her first attack, up to which time she had been perfectly healthy, without disturbance or interruption in any important function, as might

have been presumed from her condition; but after this time, her strength gradually declined, and though she continued her ordinary pursuits, slight exercise produced fatigue; her appetite became impaired, and her sleep less quiet and refreshing. She suffered no pain or soreness, but *at times* felt an uneasiness at the stomach, and sometimes an inclination to vomit. The tongue was clean and natural in appearance; the bowels were constipated; the urine limpid and abundant; the catamenia regular, but pale and almost colorless; the liver and spleen free from soreness or enlargement; the spirits cheerful, the mind sprightly, and the pulse generally regular and natural, though rather feeble.

Upon the best view which I was able to take of the case, finding no particular organ to whose account I could lay the charge of the mischief, though I suspected it to be the result of the cause which produced the chill in the first instance, there being no discoverable signs of periodicity about the case, and not suspecting the cause to be still at work, I directed my treatment to a restoration of the tone and vigour of the general nervous system, by enriching the blood, and restoring its healthy constitution at the same time. So, after the action of pills of blue mass and colocynth, to relieve the constipation, (which they failed to do,) I put her upon a generous diet, with porter, and moderate quantities of Champagne wine, or brandy, and pills of quinine, ext. of gent. and iron. Under this treatment, which seemed to me to be rational, she perceptibly grew worse from day to day, until Sunday, the 2d of March, when she took her bed for the first time, except for the purposes of rest. At this time the symptoms became more violent; the stomach was irritable, with frequent vomiting of thin, bilious matter, with flatulence, and pain at the pit of the stomach; constipation continues, with some pain in the course of the colon; considerable thirst; some slight evidences of nervous disorder, or rather of despondency, and the pulse frequent and somewhat irritable. These symptoms continued to recur, with more or less violence, for which I prescribed various remedies, and devices—such as, sinapisms and enemata, and salts, senna and manna, to act on the bowels; lime water, soda, creasote, morphine, &c., for the relief of the stomach, pains and flatulence; but all, with little or no good effect, with the exception, perhaps, of the morphine.

On the 4th, finding her condition worse, with an evident downward tendency, and the inefficiency of the remedies which I had used to restrain the vomiting, or move the bowels, which had not been done for several days, notwithstanding her enfeebled and anæmated condition, I determined to resort to calomel, and accordingly gave her 30 grains, which had the effect of stopping the vomiting, and producing two evacuations from the bowels. But, notwithstanding the favorable action of the calomel, on the morning of the 5th she had a chill, which so completely prostrated her, that she could not be moved without endangering her from syncope, and I feel confident she could not have survived another; but this one, dangerous as it was, proved to be the means of her safety, for I saw at once, from what had transpired in the last few days, that she was laboring under the baneful influence of a double tertian intermittent, a paroxysm of which could be distinctly traced from Sunday evening, up to Wednesday morning; and upon her own review of the case, she could confidently refer to her better and worse feelings, in the forenoon and afternoon, of alternate days, from the very beginning.

With the *new* lights now before me, I proceeded accordingly. I had 30 grs. of calomel and 30 grs. of quinine made into twelve pills, and directed one pill to be given every three hours; and in addition, as soon as the violence of the paroxysm had passed, I ordered some chicken soup, which she relished, and retained well. At night I gave  $\frac{1}{4}$  gr. morphine, and 10 grs. quinine.

On the morning of the 6th, her condition was improved; but as the battle was to be fought in the evening, by way of preparing her for it, I ordered 5 grs. quinine to be given at 6 o'clock, 5 grs. at 9 o'clock, and 5 grs. at 12 M. At 2 o'clock P. M., I had her enveloped in blankets, and surrounded completely with bottles of hot water, and so kept her until about 5 o'clock, when she was completely drenched with perspiration; I then had them gradually removed, her clothing changed; ordered her a cup of tea, and  $\frac{1}{4}$  gr. of morphine, and directed 5 grs. quinine to be given at 12 o'clock, 5 grs. at 3 o'clock, and 5 grs. at 6 o'clock, and the bottles to be re-applied, as before. By 8 o'clock, on the 7th, she was in a full perspiration; at 9 o'clock, I commenced having the bottles removed, with the extra covering; by 12 o'clock, she was comfortable; and from this time, when I considered her danger and disease, alike, at an end, she continued to improve. Having taken all the calomel and quinine pills, and had two or three proper evacuations, there was no further need for their continuance.

I apprehended that, in her anæmic state salivation might take place, but there were no signs of such an occurrence. As a measure of safety, I directed 10 grs. of quinine, to be given on the septenary days, or at night, preceding the morning paroxysm of the septenary days, until the fourth, or twenty-eighth days had passed. I also put her again upon the course of medicine and regimen which I had at first chalked out, but with better success,—as under it she has gone on steadily to improve, and she now enjoys rather more than her usual health, as there is somewhat more of her to enjoy it, having gained considerable upon her former weight, and lost nothing in other respects, being one of the most lovely girls that Montgomery can boast.

I have related this case, with the hope that it may be the means of helping some junior, or even senior brother, who may become similarly involved, out of the dilemma and state of perplexity in which I found myself involved in this case, for I do not hold to the truth of the aphorism, that "all is well which ends well."

The subject of "Intermittent and Remittent fevers," will be continued in my next.

As ever, yours,

SAML. D. HOLT.



## ARTICLE XIX.

*An Appeal on behalf of Southern Medical Colleges and Southern Medical Literature.* By JAS. C. BILLINGSLEA, M. D., of Foster's, Tuscaloosa Co., Alabama.

Most persons might think that this communication should be made through the medium of a popular newspaper, but as physicians are more nearly interested, than any others, on this important subject, I have chosen your journal, through which I desire to call the attention of southern physicians to the *necessity* of patronizing our southern institutions, and our southern medical journals. The necessity of this patronage is *demand*ed, not only by the *political* aspects, which are now presented in these United States, but also by *humanity*.

First, let every southern physician ask himself, how much of patronage is bestowed on our southern literature by our northern brethren; and also, what views *they* as *Northern men* entertain towards *us* as *Southerners*. There is scarcely any article emanating from a southern pen, which is republished in the North, it matters not how much of merit it may possess. But on the other hand, see how *they* are treated by us in return. Our southern journals republish every thing, which they think would advance the science of medicine, without any regard to the *geographical location* of the author. All they seem to care for, is our patronage, and don't extend to us the same in return.

If we were so poor in medical literature, and so *wanting* in great minds, whose thoughts are reflected by their writings—if we were destitute of *these*, and of colleges wherein our young men could be trained, and instructed in all that would make them useful in life, *then* I would say, of course patronize northern institutions and journals, for it is the best you can do. But on the contrary, we have medical colleges, which in point of *mental* endowments can compare favorably with any in the world. We also have medical journals, which, to the *southern physician*, are always filled with matter of interest and profit. And as our northern brethren seem to ignore everything *southern*, simply because we are *slaveholders*: and as scientific men North, can so far forget their duty, as to lend their aid—*substantial aid*—and their voices, to the getting up and sustaining of colonization

societies, for the avowed purpose of prohibiting the extension of our domestic institutions, we, as southern physicians, should withhold our patronage (which is not small), both from their colleges and their literature. They would then feel, very sensibly, the extent of our influence. For hundreds of our young men are sent North, annually, to be taught in their colleges, who spend their money most lavishly among them, and return to hear themselves and their institutions traduced, and to see their literature slighted.

But, as I said at the outset, there is another weighty (and I may say more important) reason, aside from politics. I said humanity demanded the support of home institutions. (Now I want none of my professional brethren, who claim a northern college as their alma mater, to take offence at what I shall say.) I say, humanity demands it for the simple reason, that those young men who expect to practice South, with any degree of success, should be taught in our Southern colleges; because our practice here, in the most of our malignant diseases, is entirely different from that taught in northern institutions, and by northern writers. I constantly meet with physicians of eminence, who graduated North, who have long since abandoned the most of the fundamental principles of practice, as taught them in the *lecture room*, because they have learned, by experience—by observation at the bedside, and by communing with southern writers, that they were unsuited to the diseases as they met them in this climate. It is in vain, to appeal to the young men, or their parents, not to send them North to study medicine, for they are almost invariably governed in their choice of a school by their preceptors. And it is a lamentable fact, that these same preceptors *generally* advise them to attend lectures where *they* happened to graduate; and so this institution is handed down to the student's student, and so on, as a sort of heir-loom. At the same time, these physicians, not wanting in medical attainments or practical skill, which they have acquired by long study of the diseases common to our climate, at the bedside, will acknowledge, when you appeal to their *candor* and to their *patriotism*, that we have equally as good schools (or even better), for conveying practical information, as they have North. Some of these brethren will, however, *only* admit, that as our diseases are *so different* from those at the North, and requiring such different treatment from those, that the student *at least* should attend *one course* of lectures South. Now, this admission, of itself,

should be enough to convince the student, that if *one course* South is important, *both* are more so. For why send your student North, when he will have to commence the study of *practice* when he gets back, after finding out, by experience, (bitter and mortifying as it sometimes is,) that it will not do to put in practice the theories taught him in his alma mater? You are doing him a great piece of injustice when you do so. It will be borne in mind that a large number of our physicians live in the country, or in country towns, in the midst of large plantations, and where, of course, the slave population preponderates largely; and that owing to the exposure of this class of people to the vicissitudes of the weather, the southern physician is called more frequently to visit negroes than whites. And as it has been contended, most ably, by Dr. Cartwright, and others, (and not without reason,) that the distinctive peculiarities of the negro race call for a different mode of treatment than that best adapted to the whites, I would ask, where are our students to learn this peculiar practice? Certainly not in northern institutions!—certainly not from northern journals! As to the study of the *rudiments* of the science of medicine, (Anatomy, Physiology, and Chemistry,) they can be learned North, as well as South, for *they* are the same everywhere. Again, there is no material difference in the practice of Surgery or Midwifery, North or South; but the great difference is in the treatment of our *malignant diseases*, which, when treated even on the most approved plans, kill thousands; and this *approximation* to the successful can *only* be attained *readily* by attending southern lectures, and reading southern authors. Then, where is the necessity of deserting our home institutions, or our home literature, and swelling the catalogues of those northern schools with the names of your pupils, and the pockets of those who conduct them with their money, when you have medical colleges at your door, where Anatomy, Physiology, Chemistry, Surgery, Midwifery and Therapeutics are taught *as well*, and where practice is taught better?—For a man had better never be taught than to be taught wrong.

To the southern student we would say, you can have the satisfaction of spending your means in supporting southern institutions, and southern talent, and at the same time get value received. We do not pretend to say that the fault is in northern Professors, for teaching you such practice, as not adapted to this climate; for they teach such theories as they think best to be practiced



in their climate, and the fault lies in you for going there to be taught.

To prove what I say in regard to our southern institutions being equal to any as to facilities, I have only to point you to the alumni of the Louisville, Charleston, Augusta, Nashville, Memphis, New Orleans, and of other colleges, who are now enjoying in our cities, in our towns, and throughout the country, most enviable reputations as practitioners, as writers, and as lecturers. The South should awake to the necessity of favoring home institutions, which are springing up so rapidly, and are generally *self-supporting*. The founders of, and instructors in, these institutions call loudly for your support. Georgia has now *one* old and well-established medical college, and several others in their infancy; and though it has been said that the medical college located at Augusta was *defunct*, its list of graduates for the present year numbers more than we have ever seen before; and I rejoice to learn that it was never in a more flourishing condition, and never better prepared to impart a thorough and practical knowledge of the science of medicine than at present. This institution still lives to see her graduates occupying the Professor's chair in other colleges. Charleston, Nashville, Louisville, and New Orleans, all offer rare inducements to the southern student. New Orleans excels any in the U. States, and I might say, equals any in the world, in hospital and clinique facilities. There the Charity hospital is open at all hours during the whole course of lectures, where the student may see hundreds of patients daily, suffering from all the ills that "flesh is heir to." He can see the practice of the professor or physician whose ward he may visit: he can take notes—watch the patient—see the result; and if the disease proves fatal, he can follow the body to the *dead house*, with scalpel in hand, and there examine *for himself*, to see if the diagnosis was correct. In this respect, New Orleans outstrips all her sisters. But in the majority of our southern colleges, the instructions are very thorough, and a young man even of medium talent and application will most always come out of them a good practitioner.

As to Literature, we have most excellent periodicals, conducted by the most accomplished and scientific members of the profession, and contributed to by the best southern talent, which will compare favorably with any in the United States, both in style and matter. Indeed, each number of them is full of matter of vital

interest to the southern practitioner. There is the New Orleans Medical and Surgical Journal, published bi-monthly, and edited by B. Dowler, M. D., which is always full of interesting and scientific matter, and *each number* is worth the subscription price for one year. There is the Southern Medical and Surgical Journal, published at Augusta, Ga, and edited by Prof. Dugas and H. Rosignol, M. D., which is one of the most interesting monthlies extant, supported mostly by southern patronage. There are also the Charleston, Atlanta, Memphis, and other southern journals, which deserve greater credit and better patronage than they receive. So we can't say we have no literature worth supporting.

This article is already more lengthy than at first designed. In conclusion, let me say to my brethren, let us not patronize those northern schools and northern works, simply because "distance lends enchantment" to them, to the neglect of our own. Besides medical colleges and medical literature, the arguments here used will apply equally to literary institutions, periodicals and journals, which are also largely patronized by the South; but I do not propose to notice these more fully, but will leave it to others.

My object is to get the profession to change their misguided system of patronizing *foreign establishments*, when we have as good, yea, *better* at home. My task is done, but imperfectly so; but if I can, by these few desultory thoughts, hurriedly thrown together, set the profession to thinking seriously upon this subject, and perhaps elicit something on my side from more able pens,—*then* we may look soon for a reform, and then my object will be achieved. In this, I disclaim all intention of wounding the feelings of any one, or of drawing any invidious distinctions between southern institutions or journals. All I want, is to impress upon my southern brethren the *necessity* of educating their students South, if they intend *practicing* their profession South. But if they design *locating* North, I also say send them North to study.

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*Remedial and Anæsthetic uses of Intense Cold.* By JAMES ARNOTT, M. D., London.

Although the subjects of the remedial efficacy of congelation and local anæsthesia from cold have been for some years before the public, they are as yet but little understood and appreciated. This has resulted partly from their having been imperfectly ex-

plained, in consequence of the publications respecting them being severally incomplete, and partly from the strength of the prejudice against extreme cold. Dr. Rowley, who in his attack on cowpox, declared that the accounts which he had heard of the terrible effects of communicating the "cruel and beastly" disease were enough to "freeze the soul," was probably not more horror-stricken than some have been by the proposal to freeze the body; and the introducer of vaccination was hardly more abused than the proposer of congelation has been. It is in the hope that this prejudice may be thereby abated, and the subject rendered better understood, that the following brief statement is published. Even in France, where both the remedial and anæsthetic uses of intense cold have been turned to account for some time by M. Velpeau and other leading practitioners, there is still much doubt about the best mode of applying the agent. In a paper in the *Bulletin de Therapeutique* of the 15th ultimo, M. Richet, Surgeon of the Hospital Saint Antoine, in Paris, reports thirteen operations in which local anæsthesia had been produced by the very imperfect means of the quick evaporation of ether.

As no remedy has been longer in use, and few are more valued than the local application of moderate degrees of cold, or a temperature ranging from that of dissolving ice to about 70° of Fahrenheit, it may at first appear singular that a greater or more powerful remedial effect should not have been sought by increasing the dose of the agent, or employing a lower temperature, in the same manner as we have sought and found much greater remedial benefit in many cases by using mercury, antimony, quinine, and other drugs, in larger doses than had been customary. The reason is, that medical men were under a most erroneous impression respecting the effects of very low temperatures on the body. Because a temperature of zero stops the circulation, and because the vitality of a part has been lost by its *long-continued congelation*, whether caused by exposure to severe cold in winter or by the incautious use of ice in hernia and other diseases, it was hastily and erroneously inferred that there was danger of loss of vitality from *short continued congelation*. The mistake would not be greater to infer from the fact, because a long-continued stoppage of the circulation through a limb from an improper application of a bandage has occasioned gangrene, that it would be dangerous to use the tourniquet in operations.

The correction of this error will be deemed of no little importance when it is considered that in short-continued congelation, judiciously applied, we have an unfailing means of immediately arresting inflammation wherever it can be reached by the remedy; of not only giving speedy relief from pain in many diseases, but in consequence of the organic changes produced by it, of obviating the return of pain; and in malignant disease of producing an amount of benefit much exceeding that yet accomplished by other



means. Although much inferior in importance to these results, it is yet another great benefit conferred by intense cold, that the pain which would be otherwise caused by the greater number of surgical operations can be prevented by it with perfect safety; and not only can pain be prevented, but the inflammation proceeding from the surgeon's knife, that so often proves fatal, may also be obviated by the same means, and with almost equal certainty. It will be proper to consider the remedial and anaesthetic effects of intense cold separately; but before doing so, it is necessary to mention how this degree of cold is produced and applied, as well as to attempt an explanation of its mode of operation.

That degree of cold may be called intense which immediately benumbs the part to which it is applied, speedily stops the circulation through it, and congeals the adipose matter. I have usually produced these effects by placing what are termed frigorific mixtures either immediately in contact with the skin or mucous membrane, by means of a net of thin gauze containing them, or by allowing them to act through thin bladders or metallic vessels of appropriate form; but there are various other ways of effecting the same object, some of which are preferable for certain purposes. Substances passing rapidly from the solid to the fluid, or from the fluid, to the æriform state, strongly abstract caloric from other bodies in contact with them; and substances, either solid, fluid, or æriform, already sufficiently cooled by artificial means, may be placed in contact with the part; the first, as solid metallic balls of appropriate shape; the latter two, when forming strong currents. When cold is produced by the common frigorific mixture of ice and salt, and applied by means of a gauze bag or net, the following is a convenient mode of proceeding: If the congelation is not to be extensive or long-continued, a piece of ice of the size of a large orange will be sufficient. This is well pounded in a coarse cloth or bag, and the powder being placed upon a large sheet of paper, is thoroughly mixed by means of a paper-folder, with about half its weight of common salt. The mixture is then put into a net of about four inches in diameter, and as soon as it begins to dissolve it is ready to be applied. The net is not kept motionless on the part, but is frequently raised in order that fresh particles of the mixture may be brought in contact with the skin; and the water that escapes from it may be absorbed by a sponge, or allowed to fall into a basin placed underneath. If the surface to be acted upon is of small extent, a very thin and large copper spoon containing the mixture, or a solid brass ball of about a pound weight, which has been immersed in ice and salt, will often answer, and be a neater mode than the net.

The moment a gauze net or a thin metallic vessel containing ice and salt is applied to the skin it is benumbed. There is hardly a sensation of cold produced, and no tingling or smarting. If the contact of the frigorific be continued a few seconds longer, the sur-

face becomes suddenly white in consequence, doubtless of the arrest of the circulation; and this change of color is attended with a slight smarting like that produced by mustard. There is now complete anæsthesia, which, if the frigorific were removed, would remain complete for several minutes. But if the frigorific be allowed to act, another change is produced—the adipose matter under the skin is congealed, and the part becomes hard as well as white. The depth to which the benumbing influence of cold will extend depends upon a variety of circumstances, as the degree of cold, the duration of the application, the vascularity of the part, whether pressure is used or the circulation is suspended, &c. After the usual application of cold for anæsthesia, the circulation soon returns to the part, and the skin assumes a red color, which lasts for several hours. If the congelation has been considerable, there is now some smarting felt, unless the natural heat be more gradually restored by pouring cold water on the part, or by placing on it a little pounded ice, or a bladder containing iced water. If the application has not exceeded the first stages, there is no smarting, and no necessity, therefore, for such precaution.

The redness produced does not, as might at first sight be supposed, indicate an inflammatory condition, but the very reverse. The tonic of the small arteries appears to be lessened or suspended for a time, and, instead of being inflamed, the part is rendered unsusceptible of inflammation. Parts cut after congelation healed by adhesion or the first intention more quickly than they otherwise would; and, as has already been said, we possess in this expedient a certain and prompt remedy for every inflammation accessible to its complete influence.

I. *Remedial Uses of Intense Cold.*—The remedial qualities of intense cold may be described as antiphlogistic, anodyne or sedative and specific; and it is useful in the diseases for which other remedies possessing these qualities have been employed, viz: in inflammatory, painful or irritative, and malignant diseases. The circumstances which limits its application in these is the impossibility of extending its influence beyond a certain extent or depth, although it is certain, from its effects in deep-seated disease, that this influence, whether it be direct or sympathetic, is more extensive than would at first be supposed. It may be laid down as a rule that in every case in which the local application of moderate degrees of cold has been found of service, the use of well regulated congelation would prove much more useful; and in those diseases of similar character, in which moderate cold has not been employed from the idea that their seat was beyond its reach, congelation might be tried with reasonable hope of success. Intense cold has this immense advantage over other powerful remedies of the same class, that it may be used with impunity—if it does no good it will do no harm. Who will venture to affirm this of bleeding, mercury, antimony, opium, chloroform, arsenic? Neither in my own

practice nor (as far as I can learn) in the practice of others has there been any untoward result from the use of congelation. Its action being confined to the diseased part, and not uselessly expended on the rest of the system, affords the explanation. Other topical remedies have much the same character for safety, but what other expedient of this class has a tenth part of the power of intense cold?

Instead of enumerating the diseases in which this agent has been employed according to the above classification, I shall mention, first, those in which it has been more or less successful; and, second, those in which it might, reasoning from analogy, be tried with hope of advantage. In administering intense cold as a remedy, the common or a more powerful frigorific has been generally applied directly to the part, or with the intervention only of the thin gauze containing it; and the duration of the congelation has been from one to ten minutes.

In the spring of the year 1850, I requested the house surgeon of the Brighton dispensary to apprise me of every case of acute lumbago that came under his notice, and in all of these, amounting to nine, I employed congelation with perfect and permanent success. The net containing the ice and salt was passed to and fro for five minutes, over a surface of about 8 by 4 inches, the skin being blanched during the whole of this period. In only two or three cases was it necessary to apply the remedy twice. Several of the patients rose immediately afterwards from their beds, to which they had long been confined. In most cases of chronic rheumatism the remedy has been equally successful; and this, on account of the frequency of the disease, is one of its most valuable applications. Sciatica has generally yielded to it, but by no means so easily. In acute rheumatism the local inflammation of the joints is, by this means, invariably and completely relieved, and that portion of the accompanying fever thence arising is consequently removed. The disease, thus treated, will run a painless course of about a week's duration. In no case, of about a dozen in which congelation was almost exclusively employed, was there extension of inflammation to the heart; and I am persuaded that the best plan of preventing this is to subdue the inflammation of the joints from which it generally originates. I did not use the remedy in cases where the heart was already affected, though I have since learned that congelation is employed in the hospital at Vienna (where it was introduced some years ago by Dr. Waters of Chester,) as an application to the chest of rheumatic carditis. That this affection of the heart would occasionally occur during the treatment of acute rheumatism by congelation is very probable, because it often arises, as the same affection of the joint does, from a morbid condition of the blood, over which the remedy can have no control; and that such an occurrence, in the present feeling on the subject, would be called metastasis from cold is very certain; but I am



convinced that it will yet be acknowledged, though probably after many years, that this affection would be much decreased in frequency by the adoption of any means capable of quickly subduing the accompanying arthritis. When it is considered what an immense amount of eventual mischief arises from the organic disease of the heart that occurs under the common modes of treating rheumatic fever, to say nothing of the patient's present sufferings and tedious confinement, it is to be lamented that prejudice should oppose any measure of greater promise. In the rheumatic gout the relief has been as marked from congelation as in lumbago. In ordinary inflammation of the joints it has also been exceedingly useful. Ophthalmia has been immediately cured by keeping the frigorific in contact with the gently-closed eyelid for three or four minutes. Glandular inflammation in the neck and groin yield to a high degree of cold with equal facility. I have been told that in orchitis its beneficial operation is immediate; and I have little doubt that, from its closeness to the surface, the urethral inflammation causing orchitis would be quickly suppressed. Congelation has often at once converted an irritable into a healing ulcer, though sometimes the patient has complained of the pain of the operation. It is probable that had the salt in the mixture been prevented from coming in contact with the irritable surface, this would have been in a great degree prevented. Certain acute inflammatory affections of the skin are equally under its influence, as erysipelas, eczema, impetigo. It has not often failed in prurigo, but in only one case of psoriasis has it appeared to be of service. Painful nodes are at once relieved by this means and the inflammation subdued. I have only used congelation in carbuncle as an anæsthetic previously to cutting it, but it is probable (judging from its effects in severe boils,) that the incision might have been dispensed with. It has been mentioned to me that severe cold has been employed with the same view in whitlow, of which it is certainly a sufficient cure. The inflammation following sprains, contusions, and other similar injuries is perfectly under its influence; and the same may be said of burns. In one of my publications on the subject I have related the excellent and speedy effects of congelation in a case of meningitis, and also in a case of peritonitis. I have not had the opportunity of trying it in other affections of this description. Headache of various kinds has at once yielded to the application, for a minute, of a frigorific over the painful part; and in neuralgia affecting the side it has generally proved efficacious. In neuralgia attacking the face and other parts it has often succeeded and often failed. If the seat of the disease be deep in the brain, little can be hoped from this remedy, although there are a few obstinate cases of neuralgia in which it does not deserve a trial. Toothache is generally at once relieved by it if properly applied; and there is no remedy for the painful affection of the mouth caused by

mercury comparable to congelation. A spoonful of dissolving ice and salt is repeatedly put into the mouth, until it becomes benumbed. In one case of severe scurvy of the gums, where I feared a loss of the teeth, extensive congelation of the gums immediately arrested the disease.

In many of the diseases just enumerated the promptness of the cure is as remarkable as its certainty. In military and hospital practice this advantage is very prominent.

In cancer the effects of congelation have been various. From my own experience and that of others, I think that in its early stages, and when from its size the tumor can be thoroughly brought under the influence of the remedy, it will be cured by it. In all stages the progress of cancer will be arrested or retarded, and the pain accompanying it assuaged. The difficulty in advanced cases is to cause a sufficient degree of cold to pervade the tumor. The French translator of a recent paper of mine on the subject, (*l'Union Medicale* for May,) thinks that the frequent occurrence of cysts in cancerous tumors may facilitate this. But if layer after layer is acted upon it may be enough. In cancer of the womb the frigoric is applied by means of a speculum, and one stronger than ice and common salt will generally be required. The opinions of Dr. Hughes Bennett respecting the nature of cancer have much influenced the mode in which I have used congelation in its treatment. M. Velpeau states, in his recent elaborate work on the diseases of the breast, that he has employed *long-continued* congelation as a substitute for caustic in cancer; but of this effect of the agent I have no knowledge.

There are other diseases in the treatment of which severe cold would probably be very useful. It might be applied with such a hope to the spine in tetanus, or to the scalp in certain varieties of mania. After gunshot and other severe wounds it would prove a powerful preventive and cure of inflammation. Even in pleuritis and other deep-seated inflammation of the chest, as well as in various uterine affections, benefit might rationally be expected from it. In two cases of epidemic cholera I administered a succession of draughts of a temperature of about 25° of Fahrenheit, with apparently excellent effect; and I cannot doubt that the application of cold to the interior of the stomach—which, as appears by the recently published report of the College of Physicians, is the only treatment of cholera which has been unanimously approved of—has not been carried far enough. If the irritation of the mucous membrane be considerable, (as it must be to account for the exhausting and fatal discharges) the temperature of ice merely is not sufficient to subdue it.

II. *Anæsthetic Uses of Severe Cold.*—As patients now expect to have every operation performed without pain, both they and their surgeons will be glad to have an easy and agreeable means of accomplishing this, in all the common operations, unaccompa-

mied with the dangers of chloroform. What can be less troublesome in opening an abscess, for instance, or making a cutaneous incision, than touching the skin for a moment with a small brass ball that has been immersed for a few minutes in ice and salt, or a thin spoon filled with such a mixture? It is true that in deep-seated operations such a means can only suspend the sensibility of the skin; but it is the incision of the skin which constitutes the most painful part of every operation, and if this be benumbed, a smaller, and consequently less hazardous, dose of ether or chloroform than has usually been administered would be enough to remove the sensibility of the other tissues. These deep-seated operations, however, constitute a small minority, and if the list of recorded deaths from etherization be referred to (now amounting to more than fifty) it will be found that in three-fourths of the number complete anæsthesia might have been produced with perfect safety by cold.

M. Velpeau, who introduced anæsthesia from cold into France, has, in a lecture on the subject recently reported in the *Gazette des Hopitaux*, expressed the doubt whether in some operations the hardening of the tissues by this means might not prevent their being cut with ease. I have not found this to be the case, nor does he himself allude to this supposed disadvantage, when, in his work on diseases of the breast, he mentions that he has excised tumors after anæsthesia from cold.

The fear of reaction I have already adverted to in the prefatory observations. Instead of reaction being produced, the anæsthetic is a preventive of inflammation from the wound; and were it used for this purposé alone it would be invaluable.

Local anæsthesia from cold may, as has already been observed, be produced in a great variety of ways. Some of these may be applied so as to cause immediate congelation, but it is questionable whether the anæsthesia is not more extensive and lasting when more slowly caused. Such details, however, are unsuited to the general view of the subject intended by the present communication, which, I fear, has already exceeded its proper bounds.—[*Edinburgh Monthly Jour. of Med. Science*.

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*On Laceration of the Perinæum in Primiparæ.* By T. SNOW, BECK, M. D.

I have before me the notes of one hundred and twelve cases of primiparæ, observed within the last five years, of which seventy-five, or two-thirds, had laceration of the perinæum through the whole extent; while in thirty-seven, or just one-third, no laceration took place. Unless this result had been fortified by notes made as soon as I returned home, and by the examination of the parts by the eye, as well as by the touch, I might have considered that some error had crept into these observations; but, with the precautions taken,



I feel assured of the accuracy of the result, however contrary it may be to previous opinions.

The laceration apparently took place just as the head was extruded. The perinæum was perfect immediately before the head was expelled, and was lacerated after the birth of the child. In a few instances, by keeping the finger on the centre of the perinæum, it was felt to give way, to allow the head to pass; but in the great majority no indication of laceration was perceived until after the completion of parturition. In the interval between the extrusion of the head and the expulsion of the body, the parts were so much on the stretch, that it was impossible to determine with certainty whether laceration had occurred or not; but, as the shoulders passed without the least difficulty through an opening of sufficient size, it appears most probable that the laceration did not take place at this period, but had occurred previously.

Of the seventy-five cases in which laceration occurred, fifteen of these, or twenty per cent., healed by the first intention, and the perinæum was as perfect as before the confinement; while fifty-three, or seventy-five per cent., healed by granulation, and produced a more or less perfect perinæum: In not one instance has any inconvenience followed,—such as prolapsus of the uterus, bearing-down pains, etc.,—and in only one case was there any trouble attending the accident. This case was among the first observed, and while my mind was still imbued with the serious consequences which followed laceration of the perinæum. It did not heal by the first intention, and the granulations were small, and showed little inclination to unite into those of the opposite side. I became anxious, applied different remedies, and, finally, the quilted suture. Nothing which was applied appeared to produce any effect, and the operation of the sutures was decidedly injurious. In the first instance, it frightened the patient; was a source of constant annoyance; produced irritation of the part; and, from the pressure of the silk inducing ulceration of the deeper structures, became loose, and was obliged to be removed. The laceration, however, gradually healed, leaving not more than a quarter of an inch of the rupture unclosed. In this case, the effects of the ligatures were such as to deter me from applying them on any subsequent occasion. In all the cases I have observed, neither the patient nor the nurse was aware that anything had occurred more than usual. The patient said she felt very sore, could not sit up in bed for some few days in consequence, and when she began to sit up out of bed, required a pillow, or some soft substance to sit upon. But these were considered as “nothing more than usual on such occasions.”

Little need be said of the thirty-seven cases wherein laceration did not occur, except that some, at least, were such as might *à priori*, have been supposed likely to suffer from this accident. The patients were spare, and rather above the average size; the perinæum small in extent, firm, and somewhat unyielding. But in women with

this conformation, scarcely one suffered from laceration, and then only when the size of the child was disproportionate to that of the pelvis of the mother; but when the perinæum was broad, thick, and soft, scarcely one escaped being torn through.

It, of course, will remain for further observation to determine whether these cases, taken indiscriminately from the practice of one physician, fairly represent the average occurrence of this accident in women confined with their first child. If it does, then laceration of the perinæum becomes the rule in such cases, instead of the exception; but, even if it does not, it yet shows that this accident is of much more frequent occurrence than has been supposed. These cases further show that when laceration does occur, this will heal perfectly by ordinary attention, rest, and cleanliness. Such, at least, must be admitted from the result of the seventy-five cases, every one of which has healed with little trouble, and none have been followed by any annoying consequences. From these facts we may, I think, advance a step further and conclude that, in cases where the laceration has extended through the sphincter ani, there is great probability that the laceration will heal, in many cases, by the natural process; and that time should be given for this purpose, before any operative procedure is had recourse to.

The majority of those females who form the subject of these observations, have been confined with the second, and several with the third, child; but in no instance has laceration again taken place, and in only one was there a slight tearing, during the birth of a large child, which soon healed. It would then appear that the cicatrix which follows a lacerated perinæum is less liable to give way during parturition than the natural structure of the part.

It is an acknowledged fact that severe laceration of the perinæum, involving the sphincter ani, has not unfrequently occurred without the accident having been discovered until some time subsequently, by the inability of the patient to retain the motions, and other distressing consequences. And it is also known that tearing of the perinæum, up to the sphincter, has taken place, and has not subsequently healed. But we have no information as to the circumstances which have interfered with the healing process, which, these present cases appear to show, usually takes place. My own experience would lead me to conclude, that many cases may, and do, occur, without the medical attendant being aware of the accident. For, although my attention was specially directed to this point, yet several occurred wherein the laceration was not perceived until a careful examination of the parts had been made after the labor was completed. Had this examination, which is unusual, not been instituted, the accident might not have been discovered, either at the time, or subsequently, by reason of the strong tendency which appears to exist for the healing of any tearing or other injury to the generative organs of the female, when the process of parturition has been completed.—[*Med. Times and Gazette*.

*The Simplest Operation for Uncomplicated, Congenital Phymosis.*

By T. FURNEAUX JORDAN, Esq., M. R. C. S.

Not only are Surgical authorities of opinion that circumcision is rarely, if ever necessary; but those truly frightful slits, extending half-way up the penis, to be seen in the pretty engravings which adorn some (of our best too) Surgical manuals, are fast getting into chirurgical disfavor. The present mania, however, of attributing uncomplicated, congenital phymosis in every case to the unfortunate mucous lining of the prepuce alone, and the practice of heroically slitting up the same to the very point of its reflexion from the penis, has arisen rather from the hypothesis of theorists than from the enlightened experience of acute observers.

The non-dilatability of the congenitally phymosed prepuce is confined to the margin of the preputial orifice and to the skin and mucous membrane in its immediate vicinity; such nondilatability undoubtedly extending to a greater distance on the inner than on the outer aspect of the foreskin.

The received opinion, touching the non-elasticity of the preputial lining in its entire extent, is so far from being correct, that ordinarily such lining, for some distance anterior to its point of reflexion, is arranged in rugous folds, like all other mucous membranes that are too large for the organ they line, save when the peculiar function of that organ is being exercised.

The opinion that the skin is not implicated in phymosed stricture, is equally incorrect. In one patient, on whom I operated with complete success, by far the tightest portion of the prepuce, after recovery from the operation, was the skin for two lines behind the cicatrices.

From the above remarks, it will be inferred that any incisions, which extend further than the parts forming the margin of the prepuce, and for a short additional distance on the mucous surface, are unnecessary, and hence cruel. A single incision, however, as described, would fail to secure the retraction of the prepuce, not because the incision is too limited, but because a single incision cannot possibly relieve the whole circumference of the congenitally contracted preputial orifice; two, however, or at most three, of the small incisions in question would afford complete relief.

The mode of operating which I have adopted, and with signal success in its results, is this:—Having first induced local anæsthesia, by applying pounded ice to the penis for two minutes, I introduced one blade of a pair of scissors (blunt-pointed, yet cutting to the end) to the distance of  $\frac{1}{4}$  an inch, between the glans penis and the prepuce, on one side of the penis, at a point midway between the frenum posteriorly, and the mesial line anteriorly. Both layers of the prepuce being divided to the extent mentioned, a similar incision is made at a similar point on the other side of the penis. The prepuce is now retracted to the extent allowed by the incisions,



which by this proceeding are brought quite external, enclosing between their lips an uncut layer of lining membrane. This is divided on each side, by introducing one blade of the scissors, to the extent of, and immediately under, the original wound. The entire prepuce may then be retracted, a piece of wet lint wrapped round the penis, and the whole supported by a proper suspensory bandage. The patient need not lie in bed. Where three incisions seem preferable, they should be equidistant from each other, the third being at the mesial point anteriorly, the two lateral incisions should be a little nearer the frenum, than when two only are made.

The incisions may of course vary a line or two, one way or the other in extent, according as the constriction is more or less aggravated.

The recapitulatory points to which I would draw attention, are:—

1. That the skin is more, and
2. That the mucous membrane is less involved, than is generally supposed.
3. That two, or at most three, comparatively small incisions will afford complete relief.
4. That no assistant is required, and
5. No instrument save a pair of scissors.
6. Two or three small incisions cause much less irritation, and heal much more quickly than one large one.
7. That the patient need not lie in bed.—[*Med. Times and Gaz.*

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*Congenital Absence of the Nose: New Rhinoplastic Operation.*—By  
M. MAISONNEUVE.

Among the defects of conformation of which the human face may be the seat, there is one which must be of extreme rarity, as I have been unable to discover any record of its occurrence; I allude to congenital absence of the nose. A case of this kind having recently come under my notice, I have thought it would be useful to publish it, and at the same time to make known the novel proceeding by means of which I succeeded in remedying the deformity.

Eugénie Marotte, aged seven months, was born strong and well formed, except that her face was completely devoid of any nasal prominence, and that in place of this natural projection there existed only a plain surface pierced with two little round openings scarcely one millimetre (0.03937 inch) in diameter, and three centimetres (1.1811 inches) distant from each other. In addition to giving the child a most grotesque appearance, this deformity occasioned her much inconvenience in the act of respiration, and therefore in that of sucking. In these two points of view, consequently, it was important to remedy this faulty conformation, and for this purpose her parents came to Paris to consult me.

No similar instance having been known to science, the ordinary

rhinoplastic processes were, of course, inapplicable to the case. I therefore, devised the operation I shall now describe.

On the 18th of May, 1855, the child having been previously placed under the influence of chloroform. I carried inwards, from each of the nasal orifices, a transverse incision one centrimetre (0.393708 inch in length. Two vertical incisions, commencing from the inner extremity of the preceding, were now directed towards the free edge of the lower (*sic*) lip, near which they were brought together so as to form a V. From these latter incisions resulted a narrow flap comprising the entire thickness of the lip: it was dissected and horizontally raised to form the inferior septum of the nose.

There then resulted a true artificial hare-lip, the edges of which I united by means of the twisted suture. But to obtain this union, it was necessary that the space comprised between the nasal openings should be shortened by the entire width of the flap detached to form the septum, and that consequently a projecting fold should be formed at the expense of intermediate skin. This fold, supported by the artificial sub-septum, constituted a perfectly regular nasal prominence.

In order to understand completely the mechanism of the operation it is sufficient to repeat it on a piece of paper, when it will be immediately seen how satisfactory the result is.

The final issue was not, however, obtained without some trouble. The infant, irritated with pain, did not cease during the first twenty-four hours crying, so to speak, and struggling: the consequence was a partial disunion of the points of the upper suture. This, however, was attended with the incidental advantage of suggesting to me an improvement in the operation for hare-lip.

This improvement consists in the subcutaneous division of the orbicular muscle at each side of the wound, in order to prevent its contractions from tearing open the cicatrix.

Thanks to this improvement, union took place without difficulty, notwithstanding the uneasiness of the little patient; and at the time of her departure from Paris, the cure was complete.

The nose was of a very regular shape, and the openings of the nostrils being ample, admitted of easy respiration.—[*Gazette Médical de Paris*, and *Dublin Medical Press*.

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On Necræmia. By Dr. C. H. JONES, F. R. S.

This term is applied by Dr. Williams to that condition of the blood, in which it appears to be itself primarily and specially affected, and to lose its vital properties. It is, in fact, death beginning with the blood. The appearance of petechiæ and vibices on the external surface, the occurrence of more extensive hemorrhages in the internal parts, the general fluidity of the blood, and frequently its

unusually dark or otherwise altered aspect, its poisonous properties, as exhibited in its deleterious operations on other animals, and its proneness to pass into decomposition, point out the blood as the first seat of disorder; and by the failure of its natural properties and function, as the vivifier of all structure and function, it is plainly the medium by which death begins in the body. The blood, the natural source of life to the whole body, is itself dead, and spreads death instead of life. The heart's action is faltering and feeble; the atonic vessels become the seat of congestions, and readily permit extravasations. The brain, insufficiently stimulated, after slight delirium, lapses into stupor; the medulla no longer regularly responds to the *besoin de respirer*; and the respiratory movements become irregular. Muscular strength is utterly lost; offensive colliquative diarrhœa, or passive intestinal hemorrhage often occurs; sloughing sores, or actual gangrene of various parts are easily produced; and putrefaction commences almost as soon as life is extinct. The track of the superficial veins is marked by bloody stains; hypostatic congestion takes place to a great extent; the blood remains fluid, and stains the lining membranes of the vessels. Rokitansky describes the blood as often foamy, from the development of gas, and of a dirty red raspberry-jelly color; its serum dark from exuded hæmatine; and its globules swollen up by endosmosis. Coagula are either totally absent, or are very soft and small. The exudations are of a dirty red—turbid, thin. There is scarcely any rigor mortis; the tissue of the heart and of other organs is flaccid and softened, and stained by imbibition of the serum. Gas is quickly formed in the vessels and in the areolar tissue, in giving rise to a kind of emphysema. It is very remarkable that this necræmic condition, or one closely resembling it, may be brought on by violent shocks inflicted on the nervous system, as well as by the introduction of miasmatic or animal poisons into the circulation. Violent convulsions, overwhelming emotions, the shock of an amputation, a stroke of lightning, even a severe exhausting labor, are mentioned by the German pathologist as having produced this effect. More common causes are, however, malignant scarlatina and typhus, yellow fever, the plague, and the disease called glanders. It may be said, generally, that the early appearance of sinking and prostration in any fever, indicates that the blood is thus seriously affected. We are ignorant what is the exact nature of the changes which takes place in this condition of the blood.—Probably they are more of a vital than merely chemical kind—that is, they affect the properties of the blood more than its composition. The blood globules do not appear to be destroyed; but they circulate probably some time before death, as so many dead particles prove to be enlarged and to stagnate in the capillaries, and to part with their contained hæmatine. The fibrine is in great part destroyed; but how this comes to pass we are ignorant. We can perceive, on the whole, scarce anything more than that the powers of vital chemis-



try rapidly decay, and those of ordinary chemical affinity supply their place.—[*Braithwaite's Retros.* .

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*Iodine, as an Antidote to the Poison of Rabid Animals.* By WM. H. MUSSEY, M.D., of Cincinnati.

Prof. Brainard, of Chicago, has demonstrated the value of Iodine as an application to snake bites. Early in 1853, I determined to treat wounds by rabid animals with Iodine, in the belief that it would decompose the animal poison; and I now present the following cases as the initiative of the treatment, without claiming that the question is *settled*, as I know that cases of Hydrophobia are exceedingly rare—not bearing a proportion greater than 1 to 20 of those wounded by animals supposed to be rabid:

CASE I. April, 1853.—Mr. B., aged 25, painter. When three miles from the city, was bitten by a dog supposed to be rabid, and I believe, was so, though there was no opportunity for the proof, as the animal was killed. The patient came immediately to my office. On his right hand were several wounds, to which I applied the Tincture of Iodine every five minutes for an hour, and then applied an emollient poultice, with directions to apply the Iodine every hour for the next ten hours, and every four hours for the twenty-four hours succeeding, with a change of poultice every twelve hours, till the wounds should heal. I saw the patient daily for a week, and occasionally for six months after. No symptoms of Hydrophobia had appeared.

CASE II. April 29, 1853.—H. S., aged twelve years. Was bitten by a furious watch-dog, in the side and arm, through clothing. There was no evidence that the dog was rabid, but I instituted the same treatment as in the former case.

CASE III. June 24.—G. H., aged twenty-five. Was bitten in the hand by a large pup, three months old. Ordered the application of Tincture of Iodine.

CASE IV. July 4.—W. M., aged nine years. Was bitten (through his clothing) by a dog running the streets. There were five wounds in the leg and two in the side. I saw the patient twenty minutes after, and applied Iodine and poultices, as in Case I. The patient is well at this date. The same dog bit an Italian in the leg, and the surgeon in attendance cut out a large piece of the integument, and the patient recovered from the *operation*, and was not attacked with Hydrophobia. I believe the dog was mad, but as he suffered the death penalty, there was no opportunity for proof.

CASE V. September 16.—Mrs. S. Bitten in the hand. I could not determine if the dog was rabid or only *worried* by its pursuers. Ordered Iodine. There was no subsequent trouble.

CASE VI. December 6.—W. A., aged twelve. Bitten several times in the hand. Treated as Case I.

CASE VII. H. K., aged ten. Bitten by same dog. Ordered like treatment. No subsequent difficulty.

CASE VIII. June 26, 1854.—Miss H., aged nineteen. Was bitten in joint of great toe by a *cat*. *Four days* after, I was called, and found joint inflamed, and slight tetanic spasms about the larynx and inferior maxilla. Applied Iodine and poultices, and administered antispasmodics. Patient recovered.

On a review of the foregoing, it will be noticed:

1. That in *all* cases I apply the Tincture of Iodine, as there is some uncertainty as to the character of the wound.

2. That in cases 1, 4, 6 and 7, the animals inflicting the wounds were probably rabid; whilst in cases 2, 3, 5 and 8, the animals were probably not rabid.

3. That in cases 1, 3, 5, 6, 7 and 8, the parts wounded were not protected by clothing.

4. That dogs show no respect for the calendar, or summer ordinances, but have their day whenever it suits their taste.

[*Cincinnati Med. Observer.*]

*Favus, successfully treated by Phytolacca Radix, or Poke Root.* By H. GATCH CAREY, M. D., Dayton, Ohio.

The *phytolacca decandra*, or *poke*, is indigenous to almost all parts of North America. Its medicinal qualities have received but little attention. Taken internally, it is an emetic, tardy in operation; cathartic and slightly narcotic. "In over doses it produces excessive vomiting and purging, attended with great prostration of strength, and sometimes with convulsions. In small doses it is an alterative, and has been recommended in rheumatism. Externally it has proved beneficial in piles, psora, and tinea capitis." (U. S. D.)

I have cured three cases—one severe and obstinate, of sycosis with a decoction of the poke root. The action of the remedy was prompt and highly gratifying. The pathological resemblance which subsists between this disease and favus, induced me to test the virtues of the agent in the latter. The case was one of six months standing, and had been under treatment during that time by a regular, scientific physician. The disease had only been temporarily benefited by the course of medication. The general health of the child—at eight months, was good. No hereditary elements of disease could be traced. The eruption occupied the parietal protuberances, extending forwards to the middle of the sagittal suture, back as far as the centre of the occipital bone, and all the intermediate space. A dense light brown crust covered the above defined region. Characteristic yellow points imbedded in the derma, could be detected along the line of the disease, rendering the diagnosis clear.

I directed thorough ablution with soap and water three times per day, and the crust to be kept constantly saturated with,

R. Carb. Potass.  $\zeta$ iv.

Glycerine  $\zeta$ ij. m.

The head to be covered with an oil silk cap. At the end of the third day, under the use of this treatment, the scale was entirely removed. The scalp was ulcerated in several places, and the remainder which was originally covered by the crust, furnished unmistakable evidence in a multitude of yellow points of *favus dispersus*. Pruritis was almost intolerable.

The glycerine and potash only had the effect of softening the crust, thereby rendering its removal easy by soap and water. The exuberant cryptogami were not in the least, repressed by the application. A single night was sufficient to give a coating to the diseased surface.

After removing the hair as far as possible with scissors, I ordered the ablutions to be continued, and the affected parts to be kept constantly moist with a decoction of *poke root*. This was effected by means of clothes saturated in the decoction and applied to the diseased scalp, with the oil silk cap superimposed. The crust ceased to be reproduced immediately upon the application of the wash. In four days the yellow points in the scalps had disappeared, and the ulcerations soon healed under the use of the decoction. In a fortnight after the first use of the *poke root*, the disease had vanished, and hair in limited quantities now covers the affected parts.—[*Western Lancet*.

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### Microscopy of the Kidney.

At the April session of the Academy, Dr. Isaacs read a continuation of his paper on the Microscopy of the Kidney, in which he proved still more decidedly than at the previous meeting, the fallacy of some of the physiological views of Bowman and other European authorities, and demonstrated to perfection the true anatomical and physiological relations of some important parts, especially the connection between the Malpighian tufts and the uriniferous tubes. His investigations have settled this vexed question, so that there can no longer exist any doubt of their being an anatomical connection and a direct functional relation between these two parts. He tied the renal artery of a cat, after putting the animal under the influence of chloroform, and was then enabled to see the passages of blood directly from the capilliary tuft in the tube; and he has proved to exist, what others have denied, because they failed to see, the presence of nucleated cells upon the surface of the tuft, as well as upon the inner surface of the capsule of the tube, which embraces and covers the tuft. The cells of the capsule he discovered to be of a different chemical character from those of the tuft—as nitric



acid, while it destroyed the former, had no effect upon the latter. Upon his inability to discover any cells upon the tuft, Bowman based his theory that the office of this congeries of capillaries was to separate water only from the blood; a theory which is subverted by Dr. Isaacs' discovery of a cellular formation upon them. He furthermore demonstrated the presence of various substances in the tube, such as bile in a jaundiced person, and various salts which could only have got there through the Malpighian tuft.

In this, as in his former paper, Dr. Isaacs was eminently satisfactory to his audience, who received his communication with frequent demonstrations of their gratification.—[*Med. and Surg. Rep.*

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*Placenta Prævia.* By JOHN P. MATTAEUR, M. D., LL.D., of Prince Edward, C. H., Virginia.

Implantation of the placenta over the os uteri may be central or marginal, and in either case will pretty uniformly be the cause of hæmorrhage, as the uterus expands during the advancing periods of utero-gestation. Where central implantation exists, the safety both of mother and child will be seriously jeopardized, while a marginal attachment chiefly endangers the life of the foetus, and not necessarily that of the mother, though by neglect and improper treatment, she too may be placed in imminent peril by it.

It is generally at or about the seventh month of gestation that placenta prævia begins to endanger from hæmorrhage; and this is due to the more rapid and extensive expansion of the cervix uteri, from this period, in enlarging the uterine cavity, to accommodate the increasing size of the contained ovum. In some instances, however, no serious danger threatens until labor commences at the full term.

In central implantation the placenta is attached more or less centrally over the os uteri, and is decidedly the most important and dangerous deviation, while the danger diminishes as the attachment varies from this to the marginal.

The hæmorrhage attendant on placenta prævia from the seventh month, and before labor commences at the full term, is due chiefly to the separation of the placenta around its circumference, and the consequent rupture of its vessels there, caused by the increasing dilatation of the cervix uteri at this period, while that occurring with the commencement of labor is caused by the separation of the placenta, and rupture of the utero-placental vessels around the os, as this opening dilates to give exit to the uterine contents.

In the first, the hæmorrhage is less violent and menacing than that connected with separation of the placenta from the os uteri, because the separation is gradual in the former, and the vessels, that are ruptured from time to time, smaller and more delicate. Here the vessels are ruptured only as the cervix expands; and

as this dilatation is slow and gradual also, and the consequent hæmorrhage comparatively moderate.

When, however, labor commences, the os uteri dilates more or less suddenly, and the separation of the placenta, if the case be one of central implantation, will be proportionally sudden also, and the consequent hæmorrhage must necessarily be sudden and impetuous in greater or less degrees.

If the hæmorrhage appears near about the seventh month, it will in all probability result from the separation of the placenta at its circumference, as no other portion would be likely to be detached at this period of utero-gestation; and it would be moderate, because, as already stated, the placenta must be more or less gradually separated, then, from the uterine surface, by reason of the comparatively slow expansion of the corresponding wall.

But should it set in with the accession of labor, if the views already expressed are correct, it would be both sudden and impetuous, from the sudden separation of the placenta, and rupture of the utero-placental vessels at or near the os, chiefly if not exclusively the result of sudden dilatation of the os uteri, as preparatory to the expulsion of the fœtus. And such will be the case, also, should a border of the placenta only be connected with the os uteri.

These divisions of placenta prævia implantation, if carefully studied in practice, will enable us to determine at once the character of the hæmorrhage, both as respects the seat of the vessels yielding the blood, and its danger to the mother and fœtus.

In many instances, uterine hæmorrhage occurs during pregnancy, at or after the seventh month, that causes not a little alarm with females, and much perplexity with practitioners in determining as to its precise nature.

The discharge of blood often, in some of these examples, will be quite free and menacing for a few moments, but will very soon greatly abate, or cease for some hours entirely, leading the physician to believe that there will probably be no return of it.

After a while, however, and without any known cause, it recurs, and pursues the course of the first attack; and again abates, or ceases entirely; and in this manner it may return and abate after intervals until labor sets in at full term; or it will cease altogether before that time.

This description of uterine hæmorrhage must either be due to central implantation of the placenta over the os uteri, or a marginal attachment may exist, with the border of the placenta extending beyond the os uteri sufficiently to occlude it. It may also be due to detachment of a portion of the chorion from the corresponding uterine mucous lining, by an accidental blow on the abdomen, or by a fall or severe jolt.

If it result from placenta prævia, the probabilities are against the complete arrest of the hæmorrhage until the attendant preg-

nancy terminates, and in favor of the return of it in an aggravated and menacing form when labor sets in. But should it depend on partial separation of the ovum, in a majority of cases spontaneous arrest of it would follow, and a cure be effected by proper treatment, with little danger of recurrence, unless brought on by exposure of the woman to causes similar to those that induced it at first.

A sudden and profuse discharge of blood from the vagina, as labor commences, or as the os uteri begins to dilate, could not fail to lead to the belief that there was implantation of the placenta over the os uteri, and that the hæmorrhage resulted from the rupture of the utero-placental vessels, caused by the sudden detachment of the placenta from the os as it is forced open by the uterine contractions, constituting labor in its first or preparatory stage.

In these cases it will invariably be the duty of the obstetrical attendant to examine carefully into the condition of the os uteri, per vaginam, in reference to implantation of the placenta over it. If the hæmorrhage is profuse, little difficulty will attend the introduction of the index finger of either hand into the os uteri to a sufficient depth to ascertain if the placenta is situated upon it or not, as that opening is always more or less dilated by the escaping blood. The examination, however, should be conducted with gentleness, taking care, as the finger is introduced, not to force open the os violently, nor to employ undue force with it against the placenta.

If the case is ascertained to be placenta prævia, the cause and nature of the hæmorrhage will be satisfactorily declared, and a course of treatment must be adopted accordingly. But if no placenta can be found to occlude the os uteri, and instead of that structure the delicate and thin membranous envelope of the foetus presents, it will be fair to presume that the hæmorrhage is due to accidental separation of the ovum from the uterine surface, which we know is generally harmless and easily corrected—nay, most frequently, it subsides spontaneously, if the woman is still and quiet in bed for a few days.

In the treatment of pregnancy and labor, complicated with implantation of the placenta over the os uteri, great difficulty has always been experienced, whether the attendant hæmorrhage commences early or at full term; and perhaps no question in obstetrical therapeutics has given rise to greater contrariety of opinion or of medication. It is not the writer's intention to notice these discrepancies, as he could not examine them fully in a paper like this, designed chiefly to explain his individual methods of treating placenta prævia, and through the pages of a monthly medical journal. Having had considerable experience in the management of this menacing and formidable obstetrical hydra, he proposes merely to present a condensed transcript of that experience.



In hæmorrhage connected with placenta prævia, from the seventh month to the close of the eighth, it will not generally be necessary to do more than maintain the bowels in a soluble state by gentle cathartics, such as the bitart. potass., Seidlitz powders, and the like; to detract blood if the habit is plethoric, or the pulse strong and excited; to enjoin absolute rest in the recumbent posture; to restrict the diet; to guard against nervous excitement; to allow free ventilation of the woman's apartment, and cold drinks or ice; to require the person to be loosely dressed, and to be kept cool; to use narcotics in combination with astringents if there is much nervousness, as internal remedies, or astringents alone if narcotics are not demanded, especially acetis plumbi, sulph. alum or tannin; and cold, wet cloths over the hypogastrium and vulva.

Sometimes it will be necessary to have recourse to the tampon, especially if the woman is delicate and the hæmorrhage very profuse; and when employed, it should be carefully applied to the os tinæ, and steadily and firmly pressed against it until the hæmorrhage ceases.

Even after the external appearance of blood is no longer visible, it will be safest to continue the pressure upon the tampon for some hours; and when the pressure is to be discontinued, it must invariably be gradually done, and the instrument suffered to remain.

The writer has often witnessed the return of the flooding by too suddenly removing the pressure from the tampon, and from the premature withdrawal of the tampon also. The best tampon can be made of raw cotton enveloped in fine linen or knitting, so as to form a firm ball; and the surface to be applied to the os tinæ, before the envelope is put on, should be well saturated with a powder of equal parts of sulphur, alum and tannin. By using a square piece of soft old linen of proper size for the envelope, it can be put over the medicated cotton so as to form a handle beyond the ball, that will be found convenient in the introduction or removal of the tampon; and to render the ball firm, the gathers of the envelope should be tied firmly close up to the corresponding surface of the cotton with a strong thread.

In numerous instances, the writer has succeeded in restraining uterine hæmorrhage, in cases of placenta prævia, by the energetic employment of the plan of treatment that has been briefly sketched, and women have been conducted thereby, in comparative safety, to the close of pregnancy. It is true, hæmorrhage, connected with malposition of the placenta, is not generally attended with very great danger in the 7th and 8th months of pregnancy, especially the 7th, as already stated, but it should always be regarded with solicitude, because it is sometimes fatal. When it complicates labor, however, it is indeed a formidable accident, demanding decision and the most exalted skill, in many cases, on the part of the obstetrical attendant, to advert the dangers that peril the life of both mother and infant; and it is the

form that this paper is designed chiefly to consider. A labor thus complicated is distinguished by the discharge of blood from the vagina, more or less profusely, with the commencement of uterine pain; but the hæmorrhage is most free and impetuous as the os uteri becomes dilated, and particularly so, if the dilatation is sudden; and it is the sudden separation of the placenta from the os and cervix uteri, and the consequent rupture of the connecting vessels, that cause the hæmorrhage, as has already been stated. In many cases, these pregnancies are attended with occasional discharges of blood from the 7th month down to the commencement of labor, that are restrained by appropriate treatment; but although they are menacing in a high degree now and then, the hæmorrhage is far less impetuous than that ushered in by the accession of labor.

In treating this complication of labor, the aim should be to save both mother and child, if possible. But if this is impracticable, and one must be sacrificed, every consideration of duty and humanity demands that the foetus should be the victim.

When hæmorrhage sets in with labor, whether impetuous or not, the safest and most reliable means of restraining it is the tampon; and it should be resorted to without a moment's delay; and formed and applied as already suggested, only that the extract of belladonna must be used with the astringents in medicating it, and in quantities varying from twenty-five to forty grains. This instrument, as already stated, should be carefully and firmly applied to the os uteri, so as to prevent the further escape of blood from the uterus, and to cause a coagulum to form in the os and over the separated portions of the placenta. By the addition of the belladonna to the alum and tannin, two important ends may be simultaneously attained; that is, the coagulation of the blood around and in the orifices of the ruptured vessels, and the prompt and free dilatation of the os uteri.

In many cases the hæmorrhage will be promptly and completely arrested by these measures; but if not completely staunched, it will often be greatly moderated, so as to allow time for the safe and full dilatation of the os, and spontaneous delivery of the foetus.

If, however, the hæmorrhage proves obstinate, and from the blood already lost, seriously endangers the life of the woman, it will not be safe and proper to trust farther to the tampon alone, but the immediate resort must be had either to delivery by introducing the hand into the uterine cavity and turning, or to forcible separation of the placenta from the uterus with the index finger passed between them.

If the hæmorrhage has been very profuse and exhausting in its effects, whether of long or short continuance, attempts to deliver would not be justifiable or safe.

But should the obstetrical attendant see the case before such prostrating loss of blood had taken place, and the os uteri could

be entered without the employment of undue force, delivery by turning or with the forceps might be promptly resorted to. But to attempt delivery after the woman has become greatly enfeebled by the floodings, would seriously endanger her life. Indeed it would be murderous, in a majority of instances, as the process requires more time for its completion, even when executed in the most dexterous manner, than could be safely consumed while the flooding continues.

In numerous instances, attempts to deliver, or even its accomplishment, have proved fatal under these circumstances, when life might have been perpetuated by a different procedure. True it is, some few women of uncommon vigor of constitution have escaped with life; but such examples are remarkable exceptions, and do not in the least weigh against the plan here advocated.

If the case forbid all attempts to deliver, the second expedient that has been suggested must be adopted, and without a moment's delay; that is, the separation of the placenta from the os and cervix, by forcibly and quickly passing the index finger between them, so as completely to detach the placenta from the uterine surface.

This operation causes considerable but temporary increase of the hæmorrhage, and should be executed with the utmost despatch, or the woman may sink from the loss of blood before it is accomplished. As soon as the placenta is detached, the medicated tampon, without the belladonna, must be applied. And to save time, that instrument should invariably be previously gotten ready. By carefully pressing the entering surface of the tampon against and partially into the os uteri, and firmly holding it there with the fingers, the hæmorrhage will instantly cease; and after a short time thus restrained, there will be very little danger of its recurrence, even if the tampon should be removed, which however, must not be attempted; it must invariably be forced away by the uterine contractions upon the renewal of labor.

When the case is a marginal implantation of the placenta over the os and cervix, and delivery is forbidden, by reason of the previous loss of blood, and great prostration of the woman's strength it will be necessary also to resort to the expedients just described. In some of these cases, however, when the placenta barely or imperfectly occludes the os uteri, it will only be necessary to detach it partially; and the writer's experience has led him to adopt and to advise the practice of separating that organ on its occluding border to a line a little beyond the opposite half of the os uteri. This separation very often, aided by the medicated tampon, will completely or greatly restrain the hæmorrhage, and at the same time afford a chance for the preservation of the foetus.

After the hæmorrhage is restrained by the means which have been suggested, a question arises as to the propriety of speedy delivery by artificial means. Should there be very great prostra-



tion of the system from the flooding, artificial delivery must not be attempted until the energies recuperate, as manifested by a well developed and equable reaction. In numerous melancholy instances, women have perished by being delivered too soon after the arrest of profuse hæmorrhage from placenta prævia, especially before the powers of the system had reacted sufficiently to restore a well balanced circulation. As long as there is no hæmorrhage and absence of uterine contraction, attempts at artificial delivery should never be made. There will be infinitely less danger in delaying delivery in such cases several days, if reaction is no longer deferred, than from an early resort to it. Inflammation might supervene from the detention of a dead foetus 24 or 36 hours after the arrest of the hæmorrhage, causing its death; but this possible contingency would not bear a comparison with the almost certain danger of death to the mother, should she be delivered before reaction takes place to a sustaining extent.

The writer has known women to die, in several instances, almost at the moment of delivery, who had previously flooded most profusely from placenta prævia, but had ceased to do so as soon as the placenta was detached. In these cases there was great prostration of the system, manifested by difficult respiration; absence or alarming depression of the radial pulse; tinnitus aurium; moaning; restlessness; and a tendency to swoon from the slightest change in the posture of the body; and though delivery was not attempted or accomplished for more than ten hours after hæmorrhage had been arrested, there was not the slightest tendency in the system to react; and the woman died the instant the stimulus of distention was removed from the uterus and abdomen. In such examples of placenta prævia, the safest and most rational mode of procedure is, to employ such restoratives and incitants as may be demanded to re-excite the flagging operations of the system, and to wait patiently until reaction is fully restored, or until spontaneous delivery takes place, which often occurs with the re-establishment of a well-balanced circulation, and is seldom fraught with danger, unless improperly managed or officiously interfered with.

Should utero peritonitis threaten, even before delivery is accomplished, purging the bowels impressively once or twice will effectually avert it, and not only without increasing the depression of the vital actions, but actually re-exciting them. In some most menacing and exceedingly perplexing cases of this kind, the writer has resorted to purging with the happiest results in promptly exciting the uterus into vigorous and effective contractions, speedily resulting in delivery, and in the removal of the symptoms threatening inflammation also.

It is important after every delivery to have the abdomen supportingly bandaged; but in the case now under examination it should be done with compressing force, and continued until every

menacing symptom subsides, unless contraindicated by increasing abdominal tenderness, and when to be discontinued, it must invariably be gradually done.

The views advocated in this paper, in regard to the treatment of labor and hæmorrhage, in cases of implantation of the placenta over the cervix and os uteri, have been long entertained by the writer, and their correctness and safety often verified in his intercourse with cases complicated with such malpositions, or, as usually denominated, placenta prævia. In more than thirty-five cases that have been treated by him, only two unfortunate results followed; and the treatment now pursued by him, and commended through this paper to his brethren, was suggested by those two unfortunate cases more than twenty-five years ago, while he was a young practitioner of medicine.

These views, however, are not peculiar to the writer, although original with him; and it is gratifying to find that they are entertained, in the main, also by some of the ablest and most successful as well as prominent obstetrical practitioners both of this country and of Europe, with Professor Simpson—generally conceded to be the highest authority at the present time in midwifery—at the head of them.—[*Virginia Med. Jour.*

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*Pneumonia discussed in thirty-three Aphorisms.* By M. BOUCHUT.

Our readers will be interested in the perusal of the admirably condensed series of aphorisms taken from the excellent work on Diseases of Nursing Children, by M. Bouchut. This mode of impressing a subject on the memory is very effective and one often employed by the eminent author of this treatise. We are pleased to see that a translation of the work is announced by Dr. Bird of New York, from the publishing house of the Messrs. Wood.

Primary pneumonia, which is also called pneumonia d'emblée, is rare in children at the breast.

Pneumonia usually follows simple bronchitis, or bronchitis complicating fevers, or acute febrile diseases.

Primary pneumonia is usually lobar.

Consecutive pneumonia is always lobular.

Lobular pneumonia is sometimes discrete, sometimes confluent.

The pneumonia of children at the breast is almost always double, and usually attacks both lungs.

Lobar or lobular pneumonia is observed under two anatomical forms, slightly differing as to structure; these are intra-vesicular and extra-vesicular pneumonia.

Intra-vesicular pneumonia, usually primary, leads to congestion and thickening of the walls of the cells of the lung, with the formation of an internal plastic deposit, which constitutes the character of red and gray hepatization.

Extra-vesicular pneumonia, always consecutive, only produces congestion and thickening of the walls of the pulmonary vesicles, without fibrinous plastic secretion in the interior of these vesicles.

Chronic pneumonia, more common in the infant at the breast than in the adult, is always lobar.

Pneumonia often engenders the formation of fibro-plastic miliary granulations in the interior of the cells of the lung, in lymphatic and serofulous children, or in the issue of parents tainted with serofula.

The developement of lobular pneumonia is favored by the crowding of children in the wards of a hospital.

Ordinary and frequent cough, accompanied by fever and anhelation, should make us fearful of an invasion of pneumonia.

Expiratory, groaning and jerking respiration is a certain sign of the existence of confluent lobar or lobular pneumonia.

Panting respiration, accompanied by a continual movement of the nostrils, is a sign of pneumonia.

Dullness of the chest is generally but slightly defined in the pneumonia of children at the breast.

When dullness of the chest exists in a young child with a very bad cold, pneumonia should be feared.

Dullness confined to one side of the chest in a young child rather indicates pleurisy than pneumonia.

The subcrepitant rale which accompanies the cough, the fever, and anhelation, confirm the diagnosis of confluent lobular pneumonia.

Bronchial respiration, which is rare in children at the breast, always belongs to lobar pneumonia, and sometimes to confluent lobular pneumonia,

Bronchophony, that is to say, the resounding of the cry, indicates that pneumonia has arrived at its last stage.

The exaggerated vibration of the thoracic walls at the time of the cries, indicates pneumonia, whilst their absence, on the contrary, points out the existence of pleurisy with considerable effusion.

The acute or moderate fever at first continued, presents numerous exacerbations in the course of pneumonia.

Primary pneumonia, or d'emblée, is less severe than consecutive pneumonia.

Pneumonia consecutive to simple pulmonary catarrh is often cured.

Pneumonia consecutive to measles, scarlet fever, small-pox, is a very serious disease.

The pneumonia of children at the breast is, especially, a serious disease, in consequence of the complications which precede or follow its developement.

The pneumonia of children at the breast has a great tendency to pass into the chronic state.

The pneumonia which is consecutive to the developement of fibroplastic miliary granulations, or to tubercular granulation, is usually fatal.

Expiratory, groaning and jerking respiration, accompanied by movements of the nostrils, announces that the life of the child is in great danger.

The swelling and œdema of the hands, or of the feet, which comes on in the course of pneumonia, indicates an approaching death. (Trousseau.)

The return of the secretion of tears, which has been suspended in the



attack of pneumonia, is a good augury for its favorable termination. (Trousseau.)

One or two leeches at short intervals, several blisters in front of the chest and doses of ipecacuanha, are sufficient for the cure of simple acute pneumonia.—[*Virginia Med. Journal*.

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*Necrosis of the Inferior Maxillary Bone from the Vapor of Phosphorus. Removal of the entire Lower Jaw, and Recovery.* By Dr. JAMES R. WOOD, of New York.

The very brilliant operation described in this paper, which we find in the *New York Journal of Medicine*, May 1856, has many points of interest to the reader. The victim to the deleterious fumes of phosphorus was a "dipper" in a lucifer match factory in New York, an occupation she had followed for two years and a half. The first signs of mischief appeared in the form of tooth-ache, and one tooth was extracted, but swelling of the jaw-bone supervened, followed by discharge of pus, and she entered Bellevue hospital, and came under the charge of Dr. Wood.

Necrosis of the inferior maxillary bone existed both on the right and left side, and Dr. Wood performed his first operation on the right and most diseased side. Finding the bone necrosed to its articulation, he removed the whole of the right lateral half of the inferior maxillary, and twenty-eight days afterwards he was compelled to perform a like operation on the left lateral half. The patient was discharged on the 20th of March 1856, with remarkable preservation of the contour and comeliness of the face.

Necrosis, the result of the fumes of phosphorus, although a subject of but recent investigation, is not a very rare affection, as in the paper before us, we find *seven* other instances of like character reported by Dr. Van Buren. They have all resulted from the exposure to the fumes of phosphorus in "match factories," and the vast consumption of this modern convenience has undoubtedly developed this sad disease. Dr. Wood remarks:

Phosphorus disease, or necrosis from exposure to the fumes of phosphorus in the manufacture of lucifer matches was first noticed in Germany. Lorinser of Vienna, published the first account of this disease in 1845, and reported a number of cases. Soon after, Heyfelder of Erlangen, and Strohl of Strasburg, published cases; and in 1847, Drs. Von Bibra and Geist, published a separate work. In the following year, accounts of the disease were published in England; and in noticing a case, in the surgical reports of Guy's hospital (1846-47) of separation and exfoliation of the lower jaw, from exposure to phosphorus, in the manufacture of lucifer matches, it is stated, that the disease was previously noticed to be not uncommon in those working in phosphorus. Mr. Stanley alludes to this disease in his treatise on Diseases of Bones. Cases have been occasionally reported in English periodicals; and in the *Lancet* for 1850, (vol. i. p. 41.) there is an interesting clinical lecture by Mr. Simon, on this subject, with

the full details of a case. Phosphorus disease does not seem to have been frequently noticed in this country, if we may judge by reported cases; yet the causes exist among us in all their intensity. I am aware, indeed, of but a single case which has been placed on record, and that was observed by Dr. Bigelow of Boston. That this disease is more prevalent in this country, than might be inferred from this single case, is evident from the several cases appended to this paper, which I have been able to collect, and the case kindly communicated by Dr. Van Buren.

That phosphorus is the destructive agent in this disease, has been proved by experiments upon animals. Rabbits exposed to the fumes of phosphorus, under circumstances similar to those which determine the disease in man, are similarly affected. Another fact seems clearly established, viz: the vapor of phosphorus must come into immediate contact with the periosteum or bone, in order to excite the morbid process. This explains, in the first place, why but few, comparatively, are affected who work in these manufactories; and in the second place, why the lower jaw is more frequently the seat of the disease than any other bone. For it appears that those only suffer who have decayed teeth—the defect in the teeth allowing the fumes of phosphorus to penetrate to the periosteum. So important is this latter fact, that the government of Erfurt has passed a decree, that no person having decayed teeth shall be allowed to work in lucifer match factories. In a factory in this city, no workmen is allowed to return to his work for a week after the extraction of a tooth.

The prognosis in these cases is very unfavorable. When the disease first comes under notice, the periosteal inflammation has generally long existed, and new formations already separate the bone from its covering.

More frequently the suppuration is established, exfoliations of bone are taking place, and the whole morbid process is in active progress. The system now breaks down under the exhausting discharges and poisonous emanations from the jaw; and the miserable subject of this destructive disease falls a victim to its inroads upon its strength long before the completion of the process of exfoliation.—[*Ibid*.

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*On the Treatment of Hæmoptysis.* By M. ARAN.

M. Aran agrees with those who entirely condemn the employment of blood-letting in the treatment of hæmoptysis, as it only temporarily arrests the bleeding, while it is dangerous, owing to the debility, and increased susceptibility, to the intercurrent affections it gives rise to. He has, for some time past, been engaged in testing the efficacy of the various hæmostatic agents employed in hæmoptysis; and in this paper he gives the results of his observations. He considers the essence of turpentine a most valuable remedy, given in doses of from 10 to 30 drops every hour, either in a spoonful of water, or mixed up with magnesia as a bolus. Marked amendment usually occurs in a few hours, and in from twenty-four to thirty-six hours the bleeding ceases. It is less suitable for young or plethoric subjects with febrile action, than in weak cachectic individuals, exhibiting atonic characteristics. Ergot of rye and ergotine are far less efficacious; but chloride of

sodium, given in doses of 1 to  $2\frac{1}{2}$  drachms, proves very efficacious in some cases, and has the advantage of being always at hand. Among the astringents, tannin, and especially gallic acid, are to be recommended; the latter while quite as efficacious, does not exert the same desiccating effect upon the tissues, or induce the obstinate constipation produced by tannin. As a mean dose, M. Aran gives 15 centigrammes (a centigramme is  $\frac{1}{4}$  grain) every hour or alternative hour. He has had little experience in the use of emetic and nauseating remedies; but in three cases in which veratrine was employed, the bleeding ceased as if by enchantment. This class of remedies, indeed, would deserve to stand in the first class of hæmostatic agents, were there not others possessing like efficacy, and yet not giving rise to the painful nausea these produce. M. Aran has derived great advantage from the combined use of digitalis and nitre. In ordinary cases, he gives in the twenty-four hours, 30 centigrammes of digitalis, and  $1\frac{1}{2}$  gramme (a gramme is 15 grains) of nitre, divided into four doses; but in very severe cases, these doses may be very much increased, so that the digitalis has been given to the extent of  $1\frac{1}{2}$  gramme, and the nitrate to 4 grammes, without injuriously affecting the action of the heart, while the effect produced upon the hemorrhage has been remarkable. Its arrest, never, however, takes place so suddenly under the use of these medicines, as when turpentine or gallic acid is employed.

In abundant, but not immediately dangerous hemorrhage we can choose among any of the above-mentioned means. In extremely abundant hemorrhage, we must arrest the flow as speedily as possible, by agents which do not depress the powers of the economy too much, and which are not too slow in their operation. Neither ergot, acetate of lead, nor alum is sufficient to meet the danger. Turpentine, gallic acid, chloride of sodium, or nitre with digitalis, can alone be trusted; but the necessity of increasing the dose with the intensity of the hemorrhage may, perhaps, render the chloride of sodium, and especially the nitre and digitalis, dangerous, through the possibility of the production of a too great depression of the heart's action. It is, therefore to gallic acid or turpentine that we must chiefly trust in these severe cases; and we must not limit ourselves to their employment, but also endeavor to procure a temporary arrest of the hemorrhage by ligatures to the limbs and the application of ice to the chest, allowing the means employed internally to consolidate this temporary cure.—[*Med. Times and Gaz.* from *Gaz. Hôp.*

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#### *Croup and Method of its Treatment.*

Dr. Hønerkopff has recently published a paper, in which he extols the administration of the sulphate of copper in this disease. He has used this substance in 99 cases of croup, 77 of which



recovered; and the total quantity administered by him to these patients was 2846 grains, or, on an average,  $31\frac{1}{2}$  grains each. He has never seen any poisonous effects result from its use, although one child got 27 grains daily for a week, or in all 216 grains; and another,  $4\frac{1}{2}$  years old, took 150 grains in seven days, and a third, aged  $2\frac{1}{2}$ , 120 grains in three days. No inflammation, gangrene, or other bad symptoms took place. In 8 out of 13 cases which proved fatal, there were either other diseases coexisting, or the author was called to see them too late, so that he considers that his remedy failed in only 5 out of the remaining 82 cases. The mode in which he administered the salt was to dissolve from 6 to 8 grains in  $\text{ʒj}$  of water; and, according to the age of the patient, and the severity of the vomiting induced, to administer, more or less frequently, from a teaspoonful to a tablespoonful of this solution, until vomiting occurred. The nature of the vomiting should always regulate its administration; for the induction of vomiting is absolutely essential for the therapeutic action of the remedy, as it has a kind of specific influence on the disease.

Dr. J. Samter, of Posen, has also written a paper in praise of the sulphate of copper in this disease. His remarks on its advantages and mode of administration so closely resemble those of Hönerkopff which we have given, that it is unnecessary to quote them here at length. He uses a solution of from 4 to 8 grains, (and in severe cases, 10 to 12 grains,) in  $\text{ʒij}$  of water; of this he gives  $\text{ʒij}$  repeatedly, till vomiting is induced, and thereafter  $\text{ʒj}$  every two hours.

In addition to the use of sulphate of copper, this author, at the beginning of the disease, applies four, eight, or twelve leeches to the larynx, and especially if there be any pain felt there, and he afterwards applies stimulating epithemes. He also uses the inhalation of powdered alum and sugar, employs warm baths, and envelopes the feet in hot sand, etc.—*Günzburg Zeitschrift*, vj., 1855.

Dr. Luzinsky considers that there are four therapeutical indications in the treatment of croup, which must be attended to by the physician. 1st. To change the peculiar blood crisis which exists. 2d. To prevent the localization of the inflammatory process in the larynx. 3d. To treat the spasm of the larynx. And, 4th. To encounter and destroy the false membranes which have been formed.

For the fulfilment of the first indication, most men have recommended the use of mercurials, but Luzinsky depends more upon alkalis, and especially on the carbonate of potass, which exercises a solvent action on all the albuminous products of the organism. Its use retards the development of the constituents of the blood, and greatly impairs the vital coagulability and inherent plasticity of that fluid. This is the theory of the action of this salt, which Eggert recommended as a specific in croup, after an expe-

rience of it in about 250 cases. It may be given advantageously in doses of from 3ss to 3ij daily. Carbonate of soda may do in mild cases, but the other alkali is alone to be relied on in more severe ones.

The second indication may be answered by the application of a blister, the size of a crown-piece, to the upper part of the manubrium of the sternum.

Spasm of the larynx is most surely treated by opium, applied externally, in conjunction with vesicants (15 grains to 3ss of opium, to 3ss of lard,) and also given in small doses internally.

To arrest the formation of the pseudo-membranes, nitrate of silver, in a concentrated solution, may be applied to the fauces and entrance of the larynx. Emetics may thereafter be given, and they are only necessary in the exudative stage. Luzsinsky gives decided preference to the use of sulphate of copper, which he administers by giving, every 15 minutes, a teaspoonful of a solution of two or four grains (or even more,) of the salt in 3iiss of some fluid. He does not look upon tracheotomy, in croup, in a favorable light.

Out of 30 cases treated thus by Dr. L. only seven died.—*Oester Zeitschrift*, i, 6, 8, 10, 1855; also *Schmidt's Jahrb.* xi, p. 207, 1855.

Dr. Menschel relates a case of croup in which, despite the timely and assiduous use of all the ordinary remedies for this disease, difficulty of respiration and danger of suffocation increased. He then painted the whole of the front of the neck very darkly with a strong tincture of iodine, (3j of spirit,) and covered the part with flannel, smeared with digitalis ointment. After an hour the urgent symptoms had abated, the patient slept quietly during the night, and next day was convalescent.—[*Preuss. Verein. Zeitung*, 10, 1855. *Edinburgh Med. Journal*.

*Experimental Researches on the Production of a Convulsive Epileptiform Affection, after Lesions of the Spinal Chord.* By M. BROWN-SEQUARD.

The author by numerous investigations, has assured himself that this convulsive affection may be produced after the following lesions: 1st. Complete, or nearly complete, transverse section of one lateral half of the spinal chord. 2d. Simultaneous transverse section of the posterior columns of the posterior grey cornua, and of a part of the lateral columns. 3d. Transverse section of the posterior columns alone. 4th. Transverse section of the lateral columns. 5th. Transverse section of the anterior columns. 6th. Transverse sections of the entire spinal chord, in the dorsal and lumbar regions. 7th. Puncture of the spinal chord.

Lesion of the chord would appear to be less and less capable of producing the epileptiform affection, in proportion as they are made

nearer the chordal extremity. The time of the appearance of this affection is almost always in the third week after the operation.

Convulsions occur sometimes without external excitement, but in general they can be very easily provoked, either by irritating one side of the face—in those cases where the lesion exists only in a lateral half of the chord—or the two sides indifferently, when both halves of the chord have been injured; or again, by preventing the animal from breathing for a very short time. This convulsive affection much resembles epilepsy. It appears to differ from it only in this, that the animal cries during the attack, if he is pinched. The author has shown that the number of attacks increase considerably in animals which he shut up in a narrow space, and to which he gave much food.

On examining animals having this convulsive affection, M. Brown Sequard found decidedly artificial lesion of the chord, a state of congestion of the base of the brain, and of the gasterion ganglion on both sides, when the lesion was on both sides of the spinal chord, and only on the side of the lesion, when it was on but one lateral half of the chord.

From the facts reported in this work, the author draws the following conclusions:

1st. Various lesions of the spinal chord may produce in mammiferæ a convulsive affection, having much analogy to epilepsy. It seems, consequently, that in man it is not by mere coincidence that we find alterations of the spinal chord in epileptics.

2d. Lesions of the spinal chord may produce such a change in the vitality of the trigeminal nerve, or of that part of the brain where this nerve rises, that the irritation of the branches of this nerve in the face, produces convulsions. Farther the right half of the spinal chord has this influence on the trigeminal nerve, or the encephalon of the right side, and the left half of the chord on one or other of these parts on the left side.—[*Gaz. Heb. from Amer. Med. Monthly.*]

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*The Relative Value of Disarticulation of the Knee, and of Amputation of the Thigh.*

M. Baudens, in a paper on this subject, referred by the Academy of Sciences, of Paris, to the section on medicine and surgery, says that the opinion of all the chiefs of the ambulances, confirmed by all that he saw from Marseilles and Toulon to Constantinople and the Crimea, is that disarticulation of the knee should be preferred to amputation of the thigh, whenever it is not possible to amputate the leg below the patella. Disarticulation should be performed immediately, that is as early as possible after the wound is received. Consecutively, amputation of the thigh should be preferred. The difference of success in immediate or consecutive disarticulations is due to the fact that even in the condition of health, the size of the bone is not in perfect harmony with the quantity of soft parts; and



the disproportion becomes still greater when the patient has lost his flesh by prolonged suffering and profuse supuration.—[*Gaz. Hebdom. Ibid.*

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*Gallic Acid.*

A London Physician reports several cases in which this remedy was successfully used as a hæmostatic. The first was a case of vesicle hæmorrhage, from a polypoid growth in the bladder. Six grains invariably checked the hæmorrhage. The second a case of scarlatinal dropsy. Urine at first albuminous and afterwards bloody. Five grain doses three times a day greatly reduced the amount of blood; but it was not until a drachm a day had been continued for some time, that albumen and blood both disappeared from the urine. If the acid was omitted for a single day, the urine became as bloody as ever. He took more than eight ounces of the acid, and was cured. The third was a case of hæmatemesis, from chronic gastric ulcer. Ten grains were given every hour, and the patient finally relieved. The fourth, a case of albuminuria, in which the acid was given in doses of ten grains thrice a day. Decided relief was obtained; but the patient was not cured. Case fifth, excessive menorrhagia, always checked by the acid in five-grain doses. Case sixth, menorrhagia, with ovarian irritation, simulating pregnancy. Every occurrence of hæmorrhage effectually controlled by the acid. Case seventh, hæmorrhage from the bowels of a new-born infant. The acid given too late. The child sank after the first dose, exsanguine. Case eighth, cerebral hæmorrhage from atheromatous deposit in the vessels of the brain. Relieved, but not cured, by the galic acid. Case ninth, intercranial hæmorrhage from a fall; relieved, but not cured, by the acid, in ten-grain doses. Case tenth, profuse epistaxis in typhoid fever. Two five-grain doses, and the application of the remedy to the schneiderian membrane readily stopped the discharge. Case eleventh, acute tonsillitis. Relieved by the following gargle:  $\mathcal{R}$ . Gallic acid,  $\mathfrak{D}\text{ij}$ ; distilled water, hot,  $\mathfrak{z}\text{ viij}$ . Mix. Cases twelfth and thirteenth, tonsillitis, relieved by same gargle. Cases fourteenth and fifteenth, polypus uteri. Hæmorrhage relieved by the acid in full doses. Case sixteenth, hæmorrhage from injury to the vagina. Relieved by two-grain doses of the acid every half hour and cold applications. Case seventeenth, internal piles, with unusually severe hæmorrhage, checked by five-grain doses every three hours. Case eighteenth, hæmoptisis, relieved by three five-grain doses, and a second attack by the same. Case nineteenth, erysipelas of the face, relieved by the application of a lotion,  $\mathfrak{z}\text{ ij}$  of the acid dissolved in a pint of warm water. Case twentieth, a profuse hæmorrhage from a deep cut, arrested by powdered gallic acid placed in the wound, and without pain.

He suggests that the garlic mentioned in case eleventh might be used, in conjunction with the nitric acid treatment, in scarlatina.

In cases of yellow fever, we have succeeded in restraining hæmorrhages from the stomach and bowels, and other outlets of the body, by the use of this remedy in doses of five to eight grains; and we have found it scarcely less effectual in restraining watery dejections from the bowels. A case of pyrosis was promptly relieved by the same remedy, as were also, to a marked extent, the dyspeptic symptoms with which the disease was complicated.—[*New Hampshire Jour. of Medicine*.

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*On the Treatment of Fistula Lachrymalis.* By M. TAVIGNOT.

M. Tavignot is of opinion that fistula lachrymalis is the result of an organic disaccord between the chemical properties of the tears and the physiological properties of the nasolachrymal mucous membrane. This explains both the obstinacy of the disease and the relative efficacy of that treatment which most protects the mucous membrane from the contact of the tears. We find the tears will not flow through the canal, even when it has been dilated by surgical means; while the presence of a foreign body in the canal causes the cessation of the accidents; this being better tolerated than the tears, the access of which it prevents. These various modes of treatment only succeed after long perseverance has modified and transformed the characters of the mucous membrane.

In place of occupying so long a time in obtaining this alteration in the sac and the duct, the author recommends that the gland itself should engage our attention. Where the affection does not arise from scrofulous disease, when it is amenable to appropriate remedies, he is unaware of any means of restoring harmony to the parts, although in the early stages antiphlogistics and topical remedies do much to remove complications and procure temporary relief. The contact of the tears can only, by the various means usually employed, be temporarily prevented, while obliteration of the passages is difficult to obtain, and is attended with stillicidium. The lachrymal gland itself may, however, be removed without inconvenience. It is, in fact, the orbital portion that is alone to be removed; and the palpebral granules that remain suffice, with the mucus of the membranes, to lubricate the surface of the eye. The operation is inoffensive. Very soon great amelioration ensues, after the immediate effects of the operation have passed away, and this may go on to a definitive cure. When this is delayed, owing to the still disordered state of the passages, iodine injections should be employed.—[*Moniteur des Hôpitaux. Brit. and For. Medico-Chir. Rev.*

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*The Seton before the Academy of Medicine of Paris.*

A very hot discussion has just been closed before the Academy of Medicine of Paris, on the use of the seton; and a great many instructive facts, both in ancient and modern medicine, connected with that powerful derivative, were brought to light, both by M. Bouvier, the author of the paper and advocate of the practice, and M. Malgaigne, the caustic and epigrammatic decrier of the seton. There can be hardly any doubt but that the latter eminent surgeon went too far with his condemnation, and that the timely use of the seton, especially in chronic ophthalmic cases, will continue in favor with the great majority of practitioners. M. Bouvier employs little cords of No. 1 bougies, and covered with a water-proof composition, instead of the skein or tape.—[*London Lancet*.

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## EDITORIAL AND MISCELLANEOUS.

*Sulphur to arrest Vomiting.*—We are informed by Dr. J. F. Reynolds, of Newbern, Ala., that he has recently succeeded in arresting two cases of vomiting, which had resisted the usual remedies, by the administration of a tea-spoonful of the Sublimed Sulphur. The dose is to be repeated immediately, if rejected.

Never having used sulphur for this purpose, we can say nothing of its efficacy ourselves, but think it worthy of trial.

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*Dr. H. A. Ramsay.*—We take from the Augusta Chronicle and Sentinel the following notice relating to the late notorious Editor of the "Georgia Blister and Critic," who for some years past seemed to take peculiar pleasure in traducing honest men anonymously and otherwise.

*"Bounty Land and Pension Fraud."*—The Pension Office at Washington having had suspicion of fraud being practised on account of the number of claims for bounty land and pensions for revolutionary service sent from Columbia county, in this State, despatched Mr. Stephen C. Dodge, Special Agent, to investigate the matter. After some interviews with Mr. Stewart, the U. S. Marshal in Savannah, and Mr. Ross, of Macon, the Deputy U. S. Marshal, whom he met in this city, he returned to Savannah and obtained warrants for the arrest of Dr. Henry A. Ramsay and Richard W. Jones, of Columbia county, on the charge of having fabricated testimony in support of false pension claims. The arrests were made in this city last Sunday, and the prisoners were forwarded to Savannah. On Wednesday they were examined before the U. S. Commissioner. Judge Henry required the prisoners to enter into bonds for their attendance during the examination of \$5,000, which bond was given by Ramsay, but in default of which Jones was lodged in jail. The examination is said to have revealed the grossest



fraud and deception which had been practiced on persons whose affidavits had been obtained in support of false claims. Dr. Ramsay, who is thought to have been the chief instigator of the scheme, absconded during Wednesday night, forfeiting his bail, and has not since been heard of. Vigilant efforts are being made for his re-capture. Jones is still in Savannah jail."

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*Teeth extracted without pain.*—Instruments for the production of local insensibility to pain in Dental and Surgical Operations, secured under the Patent Laws, are now ready and for sale, with full instructions for use, at \$25, and can be had by addressing Messrs. Jones, White & McCurdy, at their Philadelphia, New-York, or Boston Depots; or by addressing I. B. Branch at Galena, Ill.

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*American Dental Convention.*—The second annual meeting of this body will be held in New-York, on the 6th of August next.

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*Death of James McCafferty.*—It is with profound regret we have to announce the death of our worthy and highly esteemed Publisher. Mr. James McCafferty has been the printer and publisher of this Journal for nearly twelve years, and has always discharged the duties assigned him with punctuality and distinguished ability. The publication will be hereafter issued by Jeremiah Morris, for the benefit of the estate.

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*Ninth Annual Session of the American Medical Association, at Detroit, Michigan.*

The Association met at Fireman's Hall, at 11 o'clock, A. M., and was called to order by the President, Dr. G. B. Wood, of Pennsylvania.

Dr. Pitcher, of Michigan, in behalf of the Committee of Arrangements, welcomed the assemblage in handsome style.

The roll was then called by Dr. Wistar, of Pennsylvania.

On motion of Dr. Thompson, of Delaware, a recess of fifteen minutes was taken to allow the delegates from the respective States to report one member from each State represented, as a Committee to nominate officers for the ensuing year.

After the Nominating Committee had retired, Dr. Pitcher, of Michigan, from the Committee of Arrangements, reported the order of proceeding for the session.

The President announced the death of the eminent Dr. John C. Warren, of Boston, Mass., whereupon, Drs. Childs, of Massachusetts, and Gross, of Kentucky, having made some remarks; a committee of five was appointed to draft resolutions expressive of the feelings of this Association at the loss of their late associate.

AFTERNOON SESSION.

The Secretary read a letter from Dr. Grafton Tyler, of the District of Columbia, one of the Vice-Presidents, excusing his absence.

He also read letters from the State Medical Society of Tennessee, and from the University of Nashville, inviting the Association to hold its next

annual session at Nashville, Tennessee. Also, one tendering the use of the Hall of Representatives of that State for the purposes of said session.

The following report was accepted and the nominations unanimously confirmed :

*President*—Dr. Zina Pitcher, of Detroit.

*Vice-Presidents*—Drs. Thomas W. Blatchford, of New-York ; Wm. K. Bowling, of Tennessee ; E. Geddings, of South-Carolina ; W. H. Brisbane, of Wisconsin.

*Secretaries*—Drs. W. Brodie, of Michigan ; R. C. Foster, of Tennessee.

*Treasurer*—Dr. Caspar Wister, of Pennsylvania.

On motion, the President was requested to deliver his annual address.

At the close of the address, on motion of Dr. Atlee, of Pa.,

*Resolved*, That the thanks of the Association be presented to our late President for the able and interesting parting address he has just delivered, and that he be requested to present to the Committee of Publication a copy, for preservation in our transactions.

On motion of Dr. Atlee, of Pa.,

*Resolved*, That a Committee of three be appointed to inform the President and Vice-Presidents elect of their election, and conduct them to their seats.

The President appointed as such Committee, Drs. Atlee, of Pa., Reeves, of Ohio, and Sutton, of Ky.

Upon taking the chair, Dr. Pitcher returned thanks for the honor conferred.

Dr. Frost, of Charleston, S. C., offered the following resolution, which was adopted :

*Resolved*, That the thanks of this Association are due to the retiring officers for the zealous and efficient manner in which their duties have been performed ; to our late President, for the courtesy and ability with which he has presided over our deliberations ; to all the officers, for their attention to the laborious duties of their stations—not excepting our Committee on Publication, to whom we must feel indebted for the satisfactory form in which the volume of the transactions appears.

On motion of Dr. Gunn, of Michigan,

*Resolved*, That the resolution passed at St. Louis, requiring a majority of the Committee on Publication to be appointed from residents of the place where the meeting is held, be repealed.

Dr. Palmer, of Illinois, from the Committee on Prize Essays and Volunteer Communications, submitted the following :

“The Committee on Prize Essays and Volunteer Communications, report, that some months since they issued a card, which was extensively published in the medical journals, setting forth the terms upon which essays intended for prizes would be received ; but that the number of papers presented has been but four.

“By referring to the past records of the Association, it is found that the numbers received by preceding Committees have been, in 1852, sixteen ; in 1853, fifteen ; in 1854, nine ; in 1855, six ; and in 1856, four. Your Committee beg leave to call attention to this almost regular and quite rapid decrease in the number of essays presented, for the purpose of having the Association consider whether there be not danger that the number which may hereafter be furnished, will be so small as to afford insufficient range of comparison and choice as to cause the preference shown to be much valued, if, indeed, presentations do not cease altogether, and whether any means should be devised for preventing such a result.

"The essays received by your Committee have been subjected to a careful examination; and while admitting that they all possess a degree of merit, which would render them suggestive and useful, if given to the profession, still, in their opinion, but one manifests that evidence of careful and laborious investigation, that wide scope and rigid accuracy of logical reasoning, that chasteness of expression and artistic skill in the presentation of the subject, as to furnish sufficient claim for awarding a prize by this body.

"But one prize is therefore awarded. The essay selected for this honor, bears the title—'An Essay on the Arterial Circulation.'

"It is regarded by the Committee as possessing the merits just alluded to, and while not wishing to give an unqualified endorsement of all the views which it contains, they regard it as possessing, not only interest in its physiological and scientific relations, but also real value in its pathological and practical bearings.

"The production has considerable length, and by the fulness with which the views advanced are discussed, it partakes as much of the nature of a treatise as an essay. It has, at least, one quality which Lord Bacon considered necessary to a treatise, as distinguished from an essay,—it required a degree of leisure on the part of the writer, and will require the same on the part of the reader for him fully to appreciate its value.

"The essay bears the motto—'*Una est Veritas.*'

(Signed)

A. B. PALMER, Chairman.

SAMUEL DENTON,

SILAS H. DOUGLASS,

AB'M SAGER,

E. ANDREWS.

"On breaking the seal of the accompanying packet, Dr. Henry Harts-horn, of Philadelphia, Pa., was found to be the successful essayist."

The report was accepted.

Dr. Blatchford, of New York, from the Committee on "Hydrophobia, and the connection of the season of the year with its prevalence," read a report thereon. The Committee, in conclusion, submitted the following resolution, which was adopted:

*Resolved*, That the Secretary transmit to the Governor of each State a copy of the statistical part of this report, with the respectful request that he would bring the subject before the Legislature of the State over which he presides, that in their wisdom they may devise and unite upon a plan by which the evil may be mitigated, if not removed.

The Committee on Nominations reported in favor of holding the next annual meeting of the Association at Nashville, Tenn., and the report was adopted.

Dr. Wister, of Pa., from the Committee on Publication, made the annual report. It states that the first copies of the transactions of the last session of the Association were issued on the 10th of November, 1855; that 1000 copies were printed; that the aggregate expense of printing, illustrating and binding was \$1,922.70; that the distribution of the volume was effected, in every possible instance, by express; that Drs. C. Hooker of Ct., Alden March of Albany, J. L. Atlee of Pa., W. Brodie of Mich., C. B. Gibson of Richmond, E. L. Beadle of N. Y., H. W. DeSaussure of S. C., C. A. Pope of Mo., D. H. Storer of Mass., T. G. Richardson of Ky., J. Moran of



R. I., T. Miller of D. C., F. E. B. Hintze of Md., L. P. Bush of Del., Z. Pitcher of Mich., and J. B. Lindsley of Tenn., have rendered essential service to the Association—some in procuring subscriptions to the volume, and all by cordial co-operation in its distribution; that it is important to secure efficient co-operation in every State by the appointment of gentlemen whose duty it shall be to aid in procuring subscriptions for, and circulating the transactions; that Connecticut is especially to be commended for her services in this particular; that not a little embarrassment was experienced by the committee in restoring to the list of permanent members the names of those who had been left off by order of the Association for non-payment of assessments; that they had endeavored, however, by careful comparison of the various lists, to supply all omissions; that the committee had been reluctantly obliged to omit from the transactions two valuable reports on epidemic diseases—by Dr. L. H. Anderson, of Ala., and Dr. E. D. Fenner, of New Orleans,—but, as they had not been presented to the Association, and acted on by that body, there was no other alternative; that the following resolution, passed at the last session, should be strictly enforced:

*Resolved*, That, hereafter, beginning with the session of 1856, no report, or other paper, shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before June first.

The report further states that the number of volumes of transactions now remaining on hand is as follows: of Vol. I. 41, of Vol. II. 9, of Vol. III. 32, of Vol. IV. 7, of Vol. V. 316, of Vol. VI. 66, of Vol. VII. 120, of Vol. VIII. 351; that some of the leading journals abroad have expressed a strong desire to complete their sets, and it rests with the Association to determine whether the missing numbers shall be supplied; that, as only seven complete sets of the transactions are now in the possession of the Association, the committee recommend that no copy of either of the eight volumes which is necessary to the complete sets now remaining shall be disposed of separately, or with any number of volumes short of a complete set.

Dr. Wood, of Philadelphia, moved to refer the nominations of standing committees to the Committee on Nominations. Carried.

The same gentleman made a request in behalf of Dr. Hamilton, that the committee of which Dr. H. is chairman, may be continued for another year, it not being prepared to report at present. Granted.

Dr. Pomeroy, of N. Y., moved to reconsider the resolution requiring a member, when speaking, to stand upon the platform, and not to occupy more than ten minutes in his remarks. Lost.

Dr. Smith, of N. J., moved that that portion of the resolution requiring members, when speaking, to take the stand, be rescinded. Carried.

Dr. Atlee, of Pa., moved to refer the prize essay of Dr. Hartshorn on Arterial Circulation, and the report of Dr. Blatchford on Hydrophobia, to the Committee on Publication. Carried.

Dr. Wister, of Pa., the Treasurer, read his annual report. It recommends that the Treasurer be requested, at an early date after the adjournment of the present meeting, to address a circular to each permanent member, announcing the abrogation of the resolution of 1854—making a yearly subscription to the transactions obligatory—and the consequent

restoration to membership of all those dropped from the published list of that year,—advertising, also, the practicability of procuring back numbers of the transactions, with information as to the cost at which the series of volumes may be rendered complete, or an entire set furnished by the Association.

Dr. Gross, of Ky., stated that Dr. Wood, of New York, who was then in the meeting, had lately performed an operation in an extraordinary case—removing a jaw-bone—and moved that a time be appointed for the Association to examine the part extirpated.

Dr. Wood said he had not with him the article spoken of by the preceding speaker, but would lay it on the desk of the President in the morning.

The President read a communication from Dr. Stille, Chairman of the Committee appointed last year to consider the subject of extending the lectures of each chair in medical schools over a period of two years, stating that the views of medical institutions had as yet been imperfectly ascertained, and asking a continuance of the committee. Granted.

The President read an invitation to the Association to attend the session of the American Association for the Advancement of Science, at Albany, in August next,—at which time, also, the Dudley Observatory will be inaugurated, and an address delivered by Hon. Edward Everett. The invitation was accepted.

#### SECOND DAY.

The Secretary read communications from the following gentlemen asking an extension of time in which to report upon the subjects named :

Dr. A. J. Semmes, of N. Y.—“Coroners’ Inquests.”

Dr. J. Taylor Bradford, of Ky.—“Treatment of Cholera.”

Dr. J. M. Reese, of N. Y.—“Infant Mortality.”

Dr. E. R. Peaslee, of Me.—“Inflammation, &c.”

Dr. J. W. Corson, of N. Y.—“The Causes of the Impulse of the Heart, and the Agencies which Influence it in Health and Disease.”

Dr. Mark Stephenson, of N. Y.—“The Treatment best adapted to each Variety of Cataract, with the Method of Operation, Place of Election, Time, Age, &c.”

Dr. Beech, of Mich.—“Medical Topography and Epidemics.”

Dr. J. C. Hutchinson, of N. Y.—“The Anatomy and Histology of the Cervix Uteri.”

Referred to the Committee on Nominations.

The Secretary announced that he had received the following resolution adopted at the last meeting of the New York State Medical Society :

*Resolved*, That the members of the American Medical Association be invited to attend the semi-centennial celebration of this Society, which will occur on the first Tuesday of February, 1857.

The invitation was accepted.

The Secretary read a communication from Dr. Hamilton, of Buffalo, N. Y., transmitting the second part of a report upon Deformities after Fracture and Dislocations, and asking for a correction of the minutes of last session in regard thereto. Dr. Hamilton also asked that he be permitted to incorporate, in a volume upon the subject he is preparing for publication, that portion of the report already published by the Association.

On motion of Dr. Brodie, of Michigan, the minutes were amended.

Dr. Atlee, of Pa., offered a resolution that the request of Dr. H., in regard to the publication of the report, be granted.

Dr. Lindsley, of Tenn., opposed the resolution. A similar request was denied at the session of the Association held at St. Louis.

Dr. Palmer, of Ill., moved to refer the matter to a special committee.—Carried.

Dr. Sutton, of Ky., offered a resolution that 1,000 copies of the address of the late President, Dr. Wood, be published. Adopted.

On motion of Dr. J. B. Lindsley, of Tennessee,

*Resolved*, That a committee of three be appointed by the Chair, to prepare a suitable minute in reference to the death of our late Secretary, Dr. P. C. Gooch, of Richmond, Va., who fell a martyr while contending with the pestilence in Norfolk, in 1855.

Dr. Gross, of Ky., from Committee appointed the day previous, reported the following preamble and resolutions relative to the death of Dr. J. C. Warren, of Boston :

*Whereas*, It has pleased Almighty God to remove from the scene of his earthly labors our late fellow-member, Dr. John C. Warren, of Boston, formerly President of this Association, and for many years Professor of Anatomy and Surgery in Harvard University ;

*And whereas*, It is just and proper that, when a great and good man dies, his memory should be cherished by his fellow-citizens, and transmitted unimpaired to posterity for the encouragement of future ages ; therefore,

*Resolved*, That this Association has learned with profound regret the news of an event which has deprived the American medical profession of one of its oldest, most useful, and most illustrious members—American surgery one of its greatest ornaments—science one of its best friends—and humanity one of its noblest benefactors.

*Resolved*, That the life of Dr. John C. Warren, affords an example of a man who, notwithstanding the possession of ample riches, devoted himself, heart and soul, for upwards of half a century, to the cultivation and advancement of his profession, and to the good of the human race.

*Resolved*, That this Association deeply sympathises with the family of Dr. Warren in their bereavement, and the Secretary be requested to transmit to them a copy of these proceedings.

The preamble and resolutions were adopted, and referred to the Committee on Publication.

Dr. Gross, of Ky., read a report on "The causes which impede the progress of American Medical Literature." In conclusion, he submitted the following resolutions :

*Resolved*, That this Association earnestly and respectfully recommends: 1st. The universal adoption, whenever practicable, by our schools, of American works, as text-books for their pupils. 2d. The discontinuance of the practice of editing foreign writings. 3d. A more independent course of the medical periodical press towards foreign productions, and a more liberal one towards American ; and 4th. A better and more efficient employment of the facts which are continually furnished by our public institutions, for the elucidation of the nature of diseases and accidents, and, indirectly, for the formation of an original, a vigorous, and an independent national medical literature.

*Resolved*, That we venerate the writings of the great medical men, past and present, of our country, and that we consider them as an important element of our national medical literature.

*Resolved*, That we shall always hail with pleasure any useful or valuable work, emanating from the European press, and that we shall always extend to them a cordial welcome, as books of reference, to acquaint us with the progress of legitimate medicine abroad, and to enlighten us in regard to any new facts of which they may be the repositories.

Dr. Phelps of New York, moved that the report and resolutions, as a whole, be adopted,



At the suggestion of a member, the question was divided. The report was adopted.

Upon the reading of the first resolution, a member proposed to substitute "just" for "liberal" in line 5. Dr. Gross accepted the amendment.

Dr. Cobb, of N. Y., was opposed to the resolutions. If adopted and sent out to the world, they savor too much of know-nothingism to make them palatable. [Sensation.]

Dr. Leid, of Pa., was in favor of leaving to teachers of medicine the selection of their own text books.

Dr. Davis understood there was another report touching upon the subject—that upon "American Medical Literature," by Dr. Breckenridge, of Ky. He moved to lay the resolutions upon the table until that report was read. Carried.

The Secretary read a communication from Dr. P. A. Jewett, of Conn., Chairman of the Committee to Procure Memoirs of the Eminent and Worthy Dead. Referred to Committee on Nominations.

Dr. Breckenridge, of Ky., read a report upon American Medical Literature. It was accepted and referred to the Committee on Publication.

#### THIRD DAY—MORNING SESSION.

On motion of Dr. Atlee, of Pa.,

*Resolved*, That the President shall be authorized annually to appoint delegates to represent this Association, at the meetings of the British Association, the American Medical Society of Paris, and such other scientific bodies in Europe as may be affiliated with us. Adopted.

On motion of Dr. Mendenhall of Ohio,

*Resolved*, That the Secretary be instructed to strike the name of G. H. Cleveland from the list of permanent members of this Association.

On motion of Dr. Atlee, of Pa.,

*Resolved*, That the name of James R. McClintock be stricken from the list of permanent members.

These expelled members were accused by the movers of the resolutions of having retrograded into quackery.

On motion of Dr. Bissell, of New York,

*Resolved*, That this Association has learned with deep regret of the death of one of its members, Dr. Theodore Romeyn Beck, of Albany, N. Y., whose whole life has been devoted to the attainment and promotion of medicine and general science, and that we do hereby express our high appreciation of the excellencies of his character, distinguished by its simplicity, integrity, and firmness of purpose, and by the extent and variety of his acquirements in medical as well as in almost every department of science.

*Resolved*, That the above resolution be referred to the Committee to procure memorials of the eminent and worthy dead, and that they be requested to procure a memoir of the late Dr. Beck, to be published in the transactions of the Association.

Dr. Bloodgood, of Ill., offered the following:

*Resolved*, That the constitution of this Association be so amended as that hereafter the President shall be elected by ballot, and shall not be a resident of the State in which he is elected.

On motion of Dr. Watson, of N. Y., laid on the table.

Dr. Wister, of Pa., offered the following, which was adopted:

*Resolved*, That the invitation to gentlemen of the medical profession of Canada, extended to them by the American Medical Association at its session in Philadelphia, be renewed for the meeting at Nashville, Tenn; and that this Association may be safe from the introduction of unsuitable persons, it is recommended that gentlemen presenting themselves from the Province of Canada should be provided with a letter of introduction to this Association from one of the following gentlemen: Drs.

Tarquand A. Scott, Woodstock, Canada; Drs. Hodder, Bethune, Richardson, Bonnell, Haswell, Widmer, Beaumont, Herrick, of Toronto; Drs. O'Reilly, Craiggie, Duggan, of Hamilton; Dr. Sampson, of Kingston.

Dr. Phelps, of New York, offered the following:

*Whereas*, It has pleased an All Wise, but Inscrutable Providence, to visit the city of Norfolk, Va., and vicinity, with a desolating pestilence, equal, or surpassing, any record in ancient or modern times, and by which, in a few weeks, forty physicians, either residents or those from abroad, who had promptly rushed to the rescue, among the the number of whom was our late Secretary and associate, Dr. Gooch, of Richmond—had been swept away; therefore,

*Resolved*, That such an instance of signal and unflinching devotion to the cause of science and of humanity demands at the hands of this national Association a passing expression of their high admiration of this, another memorable instance of the unparalleled sacrifices of the profession to the interests of the healing art and of the race.

*Resolved*, That this minute be incorporated in our transactions.

Dr. Stocker, of Penn., offered the following amendments to the constitution:

Amend article 3 so that it shall read: "Article 3. The regular meetings of the Association shall be held annually, and commence on the first Tuesday of May. The Association shall meet biennially in the city of——. The place of meeting for the immediate year shall be determined by a vote of the Association."

Amend article 4 by providing for one permanent and two assistant secretaries, and also specifying the duties, &c. of each.

Laid on the table under the rule.

Dr. Dorsey, of Ohio, offered the following:

*Resolved*, That in May, 1858, and every third year thereafter, this Association meet at Washington City, and that the present officers be requested to correspond with the Board of Managers of the Smithsonian Institute, in regard to furnishing necessary rooms for the keeping of the archives of the Association.

Laid on the table under the rule.

On motion of Dr. Atlee, of Pa., the report and resolutions of Dr. Gross, and the report of Dr. Breckenridge, upon "American Medical Literature," were referred to the Committee on Publication.

Dr. Palmer, of Ill., from Special Committee to which was referred the communication of Dr. Hamilton, reported the following resolution, which was adopted:

*Resolved*, That leave be granted to Dr. F. H. Hamilton to make use of the materials of his report on "Deformities after Fractures," which is in course of publication by this Association, in his anticipated work upon "Fractures and Dislocations."

Dr. A. B. Palmer, Professor in the Michigan University, from the Committee on Plans of Organization for State and County Medical Societies, presented a lengthened and able report, containing numerous useful suggestions, with outlines for the proper organization of local societies, and a series of resolutions in accordance with the views enforced in the report. Accepted, and referred to the Committee on Publication.

On motion, the resolutions were temporarily laid on the table for further action by the Convention.

Dr. Davis, of Illinois, chairman of Special Committee, reported on "The Changes in the Composition and Properties of the Milk of the Human Female, Produced by Menstruation and Pregnancy," in a paper containing numerous valuable details of much interest to the profession and the public, obtained by careful examination and comparison, and showing conclusively the ill effects of lactation, especially during the latter of the periods referred to. Accepted, and referred to the Committee on Publication.

Dr. Chas. Q. Chandler, of Missouri, who was to report on "Malignant Periodic Fevers," submitted, as a substitute, through the Secretary, a paper on "Sulphate of Cinchona," which was received as a "voluntary contribution," and referred to a special committee.

Dr. Johnson, of Chicago, asked further time to report on "Excretions, &c." Referred to Committee on Nominations.

Dr. J. M. Newman, of Buffalo, from Committee on the Sanitary Police of Cities, presented an elaborate report, embracing details of the various estimated causes of disease in cities, as compared with rural localities, together with numerous valuable statistics of mortality in the larger cities of Europe and the Union, of which the Doctor, at the request of the Association, gave a brief, verbal abstract. The report evidently embodies a vast mass of useful information, with deductions from it that city life is inimical to health and longevity, and arguments enforcing the urgent necessity for ameliorating the sanitary condition of the populous localities of cities and large towns. Of diseases arising from impure air and insufficient ventilation, classed under the term "zimotoic," the report stated that, in 1850, 40 per cent. of all the deaths in the various cities were of that nature. The report also embodied details of the loss of life from cholera, small pox, &c., giving startling expositions of danger from these sources, and recommends the enactment of laws for compulsory ventilation and cleanliness, as well as for vaccination, &c. Accepted, and referred to Committee on Publication.

#### AFTERNOON SESSION.

Dr. A. J. Fuller, of Me., chairman of the Committee on the Best Treatment of Cholera Infantum, read a report thereon, in which he stated that the pathology of the disease was little understood, and that physicians should interchange views on the subject. The report was accepted and referred to the Committee on Publication.

Dr. Green, of N. Y., chairman of the Committee on the Use and Effects of Application of Nitrate of Silver to the Throat, read a report thereon. He asserted that great benefits had been derived from topical medication in thoracic diseases,—tuberculosis, bronchitis, &c. The report was accepted and referred to the Committee on Publication.

Dr. Flint, of Louisville, chairman of the Committee on the Best Mode of Rendering the Medical Patronage of the National Government Tributary to the Honor and Improvement of the Profession, read a report thereon. He denounced the granting of patents by the United States government to "quack medicines,"—stating, however, that it appears, from a letter written by the present Commissioner of Patents, that the practice of the office has been to discourage such abuse of its functions, and that, during the past fifteen years, but four or five such patents have been granted, although from twenty to thirty applications therefor have been made per year. The credit of sanitary improvements, Dr. Flint said, were not due to individuals, but to medical science. Such improvements are never discoveries or revelations, but inductions. The United States government should aid the great cause of medical science by making appropriations for the publication of the transactions of the National Association, and by paying prizes for the best essays on subjects selected by that Association. The report was accepted and referred to the Committee on Publication.

The Committee on Nominations made the following report:



The Nominating Committee beg leave to make the following report:  
For Chairmen of Special Committees for 1857:

Dr. E. R. Peaslee, of Brunswick, Me., on Inflammation, its Pathology and its Relation to the Recuperative Process.

Dr. J. C. Hutchinson, of Brooklyn, N. Y., and Charles E. Isaacs, of New York city, on the Anatomy and Histology of the Cervix Uteri.

Dr. J. Taylor Bradford, of Augusta, Ky., on the Treatment of Cholera.

Dr. Mark Stephenson, of N. Y., on the Treatment Best Adapted to Each Variety of Cataract, with the Method of Operation, Place of Election, Time, Age, &c.

Dr. J. W. Corson, of N. Y., on the Causes of the Impulse of the Heart, and the Agencies which Influence it in Health and Disease.

Dr. D. Meredith Reese, of N. Y., on the Causes of Infant Mortality in Large Cities, the Source of its Increase, and the Means for its Diminution.

Dr. J. Foster Jenkins, of Yonkers, N. Y., on Spontaneous Umbilical Hemorrhage of the Newly Born.

Dr. Henry Carpenter, of Lancaster, Pa., on the Use of Instruments in Obstetrical Practice.

Dr. Alex. J. Semmes, of Washington, D. C., on the Measures to be Adopted to Remedy the Evils Existing in the Present Mode of Holding Coroners' Inquest.

Dr. J. Marion Sims, of New York city, on the Treatment of the Results of Obstructed Labor.

Dr. J. B. Flint, of Louisville, Ky., on the True Position and Value of Operative Surgery as a Therapeutic Agent.

Dr. G. Volney Dorsey, of Piqua, Ohio, on the Causes and Cure of Indigestion, especially in relation to the Therapeutic Indications to be derived from the Chemical Composition of the Deposits in the Urine.

Dr. C. B. Coventry, of Utica, N. Y., on the Medical Jurisprudence of Insanity, and the Testimony of Skilled Witnesses in Courts of Justice.

Dr. Jos. Leidy, of Philadelphia, Pa., on Human, Animal, and Vegetable Parasities.

Dr. M. D. Darnall, of Bainbridge, Ind., on the value of a Strict Attention to Position in the Treatment of Diseases of the Abdomen.

Dr. George Sutton, of Aurora, Ind., on Milk Sickness.

Dr. Clark J. Pease, of Janesville, Wis., on the Blending and Conversion of the Types of Fever.

Dr. B. S. Woodsworth, of Fort Wayne, Ind., on the Best Substitute for Cinchona and its Preparations in the Treatment of Intermittent Fever and Malarious Neuralgia.

Dr. Franklin Hinkle, of Marietta, Pa., on the Use of Cinchona in Malarious Diseases.

Dr. Henry F. Campbell, of Augusta, Ga. on the Nervous System in Febrile Diseases.

Dr. John Neill, of Philadelphia, Penn., on the Laws, Governing the Deposit of Bone.

Dr. John W. Green, of N. Y. City, on the Intimate Effects of Certain Toxicological Agents in the Animal Tissues and Fluids.

Dr. George Suckley, U. S. A., on the Medical Topography and Fauna of Washington Territory.

Dr. Jas. Cooper, of Hoboken, N. J., on the Flora of Washington and Oregon Territories.

Dr. Chas. E. Isaacs, of N. Y., on the Intimate Structure and the Pathology of the Kidney.

Dr. Israel Moses, of New York City, on the Diseases Incidental to Europeans from Temperate Climates in their Transition through Central America.

Dr. T. W. Gordon, of Georgetown, Brown County, O., on the Etiology and Pathology of Epidemic Cholera, to be continued three years, and with power to add any other members.

Dr. H. A. Johnson, of Chicago, on the Excretions as an Index to the Organic Changes going on in the System.

Dr. D. D. Thomson, of Louisville, on the Remedial Effects of Chloroform.

#### STANDING COMMITTEES.

*Committee on Publications.*—Drs. Francis G. Smith, of Pa., Chairman; Caspard Wister, of Pa.; Samuel L. Hollingsworth, of Pa.; Samuel Lewis, of Pa.; H. F. Askew, of Del.; Wm. Brodie, of Mich.; R. C. Foster, of Tenn.

*Committee on Prize Essays.*—Drs. Wm. K. Bowling, of Tenn., Chairman; E. B. Haskins, of Tenn.; Thomas Lipscomb, of Tenn.; A. H. Buchanan, of Tenn.; B. W. Avent, of Tenn.; W. A. Cheatham, of Tenn.; Paul F. Eve, of Tenn.

*Committee of Arrangements.*—Drs. C. K. Winston, of Tenn., Chairman; Ira Conwell, of Tenn.; William D. Haggard, of Tenn.; J. L. C. Johnson, of Tenn.; F. A. Ramsay, of Tenn.; Geo. Grant, of Tenn.; J. B. Lindsley, of Tenn.

To fill vacancies in the Committee on Medical Topography and Epidemics.

*New Hampshire.*—Dr. V. P. Fitch, of Amherst.

*Colifornia.*—Dr. Robert Murray, of Fort Miller.

To fill vacancies in the Committee upon a Uniform System of Registration of Marriages, Births and Deaths:

*Vermont.*—Dr. Adrian T. Woodward, of Castleton.

*Connecticut.*—Dr. Wm. B. Casey, of Middletown.

*Virginia.*—Dr. R. W. Haxall, of Richmond.

*California.*—Dr. Arthur R. Stout, of San Francisco.

They recommend the continuance of the "Committee to Procure Memorials of the Eminent and Worthy Dead," and that the report, as far as prepared, be referred to the Committee on Publication.

#### STANDING COMMITTEES.

*On Medical Education.*—Drs. E. Geddings, of S. C., Chairman; C. W. Le Boutillier, of Minnesota; G. F. Mitchell, of Ohio; S. W. Clanton, of Ala.; S. W. Butler, of N. J.

*On Medical Literature.*—Drs. R. Hills, of Ohio, Chairman; D. W. Yandell, of Ky.; R. R. Porter, of Del.; H. A. Johnson, of Ill.; Charles E. Swan, of Maine.

The President stated that Dr. Anderson, of Ala., chairman of Committee on Medical Education, had sent in his report. It was accepted and referred to the Committee on Publication.

A report from Dr. Wroth, of Md., on the Medical Topography and Epidemics of the Eastern Shore of Maryland, was accepted and referred to the Committee on Publication.

A Report from Dr. Cain, of S. C., on the Epidemic of Yellow Fever in

Charleston in 1854, was accepted and referred to the Committee on Publication.

A report from Dr. Fenner, of La., on the Medical Topography and Epidemics of Louisiana, was accepted and referred to the Committee on Publication.

Dr. Palmer, of Ill., offered the following, which was adopted.

*Resolved*, That the volunteer communications in the hands of the Committee of Arrangements be referred, with all other such communications, to a special committee to be appointed by the Chair, residing at the place of publication of the transactions; and if in their judgment, the papers are worthy, they be referred by them to the Committee on Publication, to go into the transactions of the Association.

The President appointed as such a committee, Drs. A. Stille, S. Jackson, and F. J. B. Biddle.

The authors and titles of the volunteer communications were announced by Secretary Brodie as follows:

By Dr. C. J. Chandler, of Rocheport, Mo., on Sulph. Cinchona in Periodic Diseases.

By Dr. Isidor Gluck, of New York, on Formation of Gun Shot Wounds, &c.

By Dr. G. P. Hachenberg, on an Improved Method of Applying Compression to the Scrotum.

The Committee on Medical Literature, for 1855, was continued for another year.

Dr. Neill of Philadelphia, offered a resolution that no medical preparation, account of surgical operation, or anything else designed or calculated to give notoriety to an individual, be laid before the Association, until reported upon by a special committee.

Dr. Wood of N. Y., presumed that this resolution was aimed at him. He had come here with the description of a disease never before described by surgeons—phosphorus disease of the jaw-bone. He had felt great delicacy in inviting the attention of the Association to the subject, and it was not until after consultation with many of the most prominent members of the body, that he had permitted a friend to do so. As for the charge of seeking notoriety, he denied it *in toto*. He had aimed at no such purpose, and he felt wounded at the tone of the resolution.

Much applause followed the conclusion of Dr. Wood's remarks.

Dr. Neill disclaimed the intention of personal allusion in the resolution he had offered. That resolution embodied a principle which never should be violated. Dr. Wood's reputation, or notoriety, might not be enhanced by the action under reference, but the privilege of similarly proceeding might be abused by other persons hereafter.

Dr. Neill's remarks were received with applause.

Dr. Wood said he had heard beforehand that such a resolution was to be offered; and it was not the resolution itself that he cared so much about, as the outside talk. He expressed a desire that the motion of Dr. Gross, of Ky., inviting the Association to examine his (Dr. Wood's) surgical specimen, would be stricken from the minutes.

Dr. Thompson, of Del., made some humorous remarks. He hoped that New York would hold her jaw, and Philadelphia not stick in hers. He trusted that Dr. Neill would withdraw his resolution, and that Dr. Gross' motion would be stricken from the minutes. If these were done, he would



see that all was made right between the opposing gentlemen before they reached home.

Dr. Gross moved to strike his motion referred to from the minutes, for the purpose, he said, of removing the bone of contention.

Dr. Neill withdrew his resolution, and Dr. Gross' motion was stricken from the minutes.

Dr. Dorsey, of Ohio, offered the following resolution, which was adopted :

*Resolved*, by the American Medical Association, That the Committee of the Etiology and Pathology of Cholera be instructed to memorialize the Congress of the United States, requesting that Honorable body to grant every necessary assistance which can or will promote the objects for which the Committee has been appointed.

Dr. Wister, of Pa., offered the following which was adopted :

*Resolved*, That a committee of three be appointed by the President to correspond with the proper officer of the Smithsonian Institute, inquiring into the possibility of procuring a chamber in that institution for the uses of this Association.

The President appointed as such committee, Drs. Wister, of Pa., Hale, of Washington, and J. Neill, of Pa.

Dr. Phelps of N. Y., offered the following, which were adopted :

*Resolved*, That the thanks of this Association are due, and are hereby tendered, to the Fire Department of the city of Detroit, for the use of their large and commodious hall, so amply furnishing to us accommodation for the convenient transaction of business.

*Resolved*, That the urbane deportment and elegant hospitalities of the profession and of private individuals, as well as the polite attention of citizens generally, demand of this Association a high appreciation of the cultivated manners of this city of the West, and which has tended greatly to enhance the pleasure of the session here of the delegates from abroad.

Dr. Atlee, of Pa., offered the following, which was adopted :

*Resolved*, That all voluntary communications hereafter presented to the Association shall be referred to a Special Committee, to be appointed by the President on the first day of each annual meeting, whose duty it shall be to examine such communications and report upon the propriety of their presentation and reference to the Committee of Publication.

Dr. R. K. Smith, offered the following :

*Resolved*, That a special committee be appointed to report to the next meeting of the American Medical Association a classification of those diseases which involve a derangement of the mental manifestations.

Adopted, and Dr. Smith appointed chairman of said committee, with power to choose his associates.

Dr. McGugin offered the following :

*Resolved*, That a special committee be appointed to report on the subject of "Stomatitis Materna."

Adopted, and Dr. McGugin appointed chairman of such committee.

On motion of Dr. Bailey, of Ill., Dr. Davis, of Chicago, was requested to continue his observations on the changes produced in the composition and qualities of milk by pregnancy and menstruation ; also the best substitute for the mother's milk when weaning becomes necessary ; and report at the next meeting of the Association.

The Association then adjourned to meet in Nashville, Tenn., in 1857.

*A Uterus in a Man sixty-three years old.* By PROF. LANGER.—The case of Professor Langer is a physiological curiosity. Professor Arámij has recently found, at the necropsy of a man sixty-three years old, a structure resembling a uterus, between the rectum and bladder. The man had

had a "capon's voice," beard well grown; he had lived thirty years in childless wedlock. The uterus was two-horned, ending in two large open tubes. The mesometrum (ligamentum uteri latum of the female) ended on either side in a fine doubling of peritoneum; a true ala vespertilionis, which embraced the testicles and epididymi; and, at the upper border, the end of the tube. On the left side, the uterine horn, with its tube, was dragged over by a scrotal hernia. The distance between the two testicles in the preparation is sixteen inches. A round ligament (uterine) is marked by a bundle of vessels on the right side. The uterus is connected with the upper part of the prostate. The arteries of this uterus arise, with those of the bladder, from a common arteria vesico-uterina. The organ could be easily inflated through the abdominal end of the tube. There were no strong folds in the interior, even at the isthmus. Above the isthmus, the walls of the two-horned uterus were soft, the muscular tissue loose, its mucous membrane was easily separated as a distinct layer. On a section, there were detected tubular crypts opening on the free surface.

In fine, there were distinguished three parts of this uterus; An orificial part—a glandless, thickened portion, terminating at the isthmus; and a part provided with the ordinary uterine glands, which end in two short horns, which again end in tubes. The testicles were of the normal size. The vasa deferentia ran in an oblique direction to the isthmus uteri, to penetrate the prostate. True vesiculæ seminales were absent.—[*Med. Chir. Review*.

*Quick Process for Mercurial Ointment.*—M. Bernier, Pharmaceutist of Reuwez (Ardennes,) recommends the following process. Take one-third of the lard to be used for the ointment, heat it in a skillet of copper till it commences to disengage vapors and burn, and then pour it into an earthen vessel, and place it in the cellar for ten or fifteen days. Use this lard to extinguish the mercury, employing an iron mortar, and observing to add the mercury gradually as each addition disappears. The mercury is soon perfectly extinguished when the rest of the lard is incorporated thoroughly, the whole operation requiring but an hour.—[*Reportoire de Pharmacie and American Jour. of Pharmacy*.

*Muriate of Opium.*—We have met with, in looking over old files of the Medical Times and Gazette, a new preparation of opium; and as it is always desirable to have as many modifications as possible of a drug which so frequently requires to be used, and which acts so differently on peculiar idiosyncracies, we give it a place in our pages.

Take of the best powdered opium, 3i; muriatic acid, 3i; distilled water, 3xix. Shake this mixture frequently for fourteen days, and strain. The dose is from twenty to forty drops.—[*Philadelphia Med. and Surg. Jour.*

*Chloride of Zinc Collyrium.*—Mr. Critchett of the Royal ophthalmic hospital (Moorfields) has been in the habit of using frequently a lotion of the chloride of zinc as a lotion in thickened and vascular conditions of the conjunctive. He regards them as in an analogous condition to the gleet of the urethra, and calls this condition a "gleet of the eye." Its strength is one grain to the ounce.—[*Ib.*

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## ORIGINAL AND ECLECTIC.

### ARTICLE XX.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

#### LETTER NO. 13.

MONTGOMERY, ALA., June 25th, 1856.

*Messrs. Editors*—Having spoken of the *periodic* character of these fevers, (intermittent and remittent,) and insisted upon the necessity of attention to that which constitutes their most important characteristic feature—important, at least, so far as their proper treatment is concerned,—I will next examine them with reference to the nature of their special pathology; but before I do so, it is necessary that I should make some general remarks respecting the nature of that condition of the system called “fever.”

Heretofore, in my remarks respecting the general pathological conditions of excitement and depression, I have designedly neglected to draw any distinctions between the febrile affections with which they were associated, whether they were regarded as idiopathic or symptomatic, for the reason, that I desired to keep the attention fixed upon the *conditions*, and not upon the *diseases*, with which they were associated; and for this purpose, selected pneumonia, or inflammation of the lung, as the *disease*, and the fever, as the consequential condition, varying in character and degree, according to the nature of the individual, and general predisposing causes, epidemic influences, &c., which I have already pointed out.



I come now to consider "fever" in the light of a *disease*, and not a *condition*, symptomatic of, or depending upon, the pre-existence of some other disease; and the first question which presents itself is—What is fever? If we define it to be a state of general nervous excitement, with increased vascular action to such a degree or extent as to derange, interrupt, or suspend, the healthy performance of the vital functions, with the characteristic signs of such a condition, as heat and dryness of skin, with increased strength and frequency of pulse, it may serve to convey a general idea of fever, but does not let us into the secret of its first cause, or the true pathology of the disease. A better definition of fever, in my opinion, is, that it is an *effort* of the system to relieve some laboring organ or impeded function, to restore some suspended secretion, or to rid itself of the presence of some noxious and offending cause. That fever, though it consists in a concatenation of morbid actions which involve the whole system, often producing the most dangerous and fatal results, is nevertheless a recuperative process, or a sanative effort of the system to overcome some pre-existing morbid impression under which it labors, as the result of the operation of one or more of the thousand causes, appreciable and non-appreciable, moral, physical and chemical, which are perpetually at war with the vital powers, and interfering with the healthy operations of the animal economy. That the concatenation of morbid actions constituting fever has its origin or starting point in some part, organ, system, or function, all being subject to the influence of the morbid agents, and capable, under circumstances, of originating the febrile movement. That the *pre existing morbid impression* which calls the sanative effort of the system into action, is a change in the innervation of the part, which implies a departure from the line of healthy excitement, by such an accumulation or exaltation of nervous power above, or such a loss, destruction, or depression of nervous power below that line, as to interrupt, suspend or destroy the healthy action of the part, organ, system, or function involved, and consists of *debility* or *nervous depression* the first link, *irritation* the second, and *inflammation* the third, in the chain of all morbid actions; upon these depending all the changes which take place in the fluids and solid tissues consequent upon the febrile movement. This view of the subject assigns to all fevers a local origin, but it does not explain how the existence of a local morbid impression,

either of depression, irritation or inflammation, brings about the febrile movement. This may not be so difficult to explain, or understand, with reference to those fevers which are recognized as symptomatic, having inflammation or irritation as their ostensible cause, if we call to our aid the physiological relations which are known to exist between all parts of the system through the great nervous centres, and the facility and rapidity with which, by direct and reflex nervous action, impressions are transmitted and communicated from one part of the organ or system to another. But it is somewhat different with those fevers which have no such ostensible cause, and which have, in consequence, been recognized as idiopathic fevers. Such are the fevers under consideration (intermittents and remittents) in their essential typical character.

To explain the origin of these fevers, we must suppose, what has generally been conceded, that the causes, which are very numerous, act with a greater degree of force upon some organs than upon others—that some are directly depressing in their influence, and others indirectly so; but that they all tend to the same result, namely, debility and depression. Pathologists have endeavored to assign for the seat and origin of these fevers a special location; some have taken the brain, others the spinal or ganglionic centres, while others have taken particular organs, as the stomach, liver, spleen, &c. But the truth, I think is, that though some organs are more uniformly implicated in their origin, none can be said to be invariably or essentially concerned; but that those organs which have been most strongly impressed, or which yield most readily to depressing influences, will have to bear the brunt and burden of the disease. Hence the great variety of these diseases which have been described by the systematic writers, both in this country and Europe—varieties founded, not upon any difference in their essential pathology, but upon the organs involved. When, then, any important organ, from the operation of the depressing causes, falls into such a state of debility or depression as to render it incapable of performing its accustomed functions, the recuperative powers of the system are called into requisition in aid of the laboring organ; the sanative effort commences, and a rally of the vital forces takes place in the organs where it accumulates, at the expense of a proportional loss to other organs and parts of the system. This process will usually be attended with a sort of oscillatory motion in the nervous and circulatory systems,

constituting the forming stage of these fevers. At this time, the general, remote or systemic capillaries, sharing in the general loss of nervous power, become relaxed, allowing the free flow of blood out of the arteries, while its flow is retarded in the lungs, from a similar loss of power in the muscles of respiration. Thus, the balance between the arterial and venous portions of the circulation becomes broken, and the blood accumulating upon the right side of the heart, in the large venous trunks and cavities, constitutes the congestive or cold stage or chill. Now, though an analysis of the symptoms and phenomena which belong to, and distinguish this condition, shows not a single one which is characteristic of fever, but indicates, on the contrary, a diametrically opposite condition, we are bound to consider it an *essential* condition in the pathology of these fevers, being generally found to appear in the first and the last act, and frequently throughout the drama. When this condition has reached the lowest point of depression, and continued for a somewhat indefinite time, the recuperative powers of the system are again called into operation, the sanative effort and the reactionary movement commences. The accumulated excitability, the nervous power, which had been rallied in support of the laboring organ, being now no longer necessary for its support, is redistributed to the organs whence it was taken. The organs of respiration thus acquiring their accustomed power of action, allow a free flow of blood through the lungs, while the remote or systemic capillaries, having regained their lost tone and power of action, and the blood retarded in its flow through them, accumulates upon the left side of the heart, producing a general arterial plethora, giving rise to the characteristic phenomena of, and constituting the true febrile condition. When this reactionary movement commences, which is at first slow, important changes take place with respect both to the nervous and circulatory systems. The blood which had been pent up, and become somewhat depraved, acquires, in its passage through the lungs, new life, which it imparts to the heart and arteries, to the brain and other nervous centres, increasing their activity, and thus creating a state of general nervous excitement and increased vascular action, giving rise to heat and dryness of skin, and strength and frequency of the pulse, the characteristic symptoms of fever. This state of excitement, after continuing for a somewhat indefinite period, gradually subsides, the capillaries gradually relax, the



balance in the circulation becomes restored, the secretions become re-established, and an end is put to the paroxysm.

This hasty and imperfect sketch of an intermittent, serves to show us the existence of two distinct pathological conditions, one consisting in a state of general nervous depression, attended as a consequence with a broken balance in the circulation, and an undue accumulation of blood in the venous system; the other consisting in a state of general nervous excitement, with a consequent broken balance in the circulation, and an accumulation of blood in excess in the arterial system. That one, or the other, of these conditions constitutes the essential pathology in *all* fevers, there can be but little doubt; and that both are necessary and essential to the formation and progress of intermittent fever, I think there can be none; and I might say that there is little with respect to remittent fever. It is true, that a paroxysm of these fevers may be ushered in with such slight evidences of the existence of depression and congestion, as to escape the attention of the patient, and the observation of attentive and skilful observers; but such cases cannot be taken as exceptions to the general rule, as I have before shown that these conditions may exist in various degrees of development, from the lowest grades of depression below, to the highest grades of excitement above the line of a healthy excitement; and I think it would be much more fair and reasonable to suppose that the depression really existed in such cases, though not observable, than to suppose that it did not, because the signs of its existence could not be observed.

My impression, therefore, with respect to these fevers, is, that the first essential element in their pathology is *nervous depression*, with more or less of general venous congestion; and that the second essential element in their pathology is, *nervous excitement*, with increased vascular action, with more or less general arterial plethora. Whether this be the case with respect to other fevers, must remain for further discussion, while we go back a little, and examine into the laboring organ which has given rise to all this mischief and disturbance. Well, in the absence of positive proof to sustain the position, I would assume, as the most probable state of the case, that the accumulated excitability or exaltation of nervous power in the weak and laboring organ would serve to relieve it from its condition for the time being, but upon its re-distribution, and the subsidence of the general excitement,

it would be left in near about the same state of debility and depression as at first, and would be the subject for renewed or repeated efforts of the system, through a succession of paroxysms, until the condition was removed or overcome by the efforts of nature, or art; such being the character of our simple intermittents. Or, to take another step in the morbid concatenation, we may suppose that the weak and laboring organ being, in consequence, unable to resist the force of an increased column of arterial blood, which would accumulate in undue quantity, and thus give rise to irritation in the organ, would in turn have the effect of keeping up for a longer time, and in a higher degree, the febrile movement as observed in our simple remittent fevers; or, from the oft recurring state of irritation of the organ from repeated paroxysms, or a protracted state of general excitement, the local excitement or irritation might eventually spring up into a state of inflammation, the highest and last link in the chain of morbid actions, which we see occurring sometimes in intermittent and remittent, and in various other forms and grades of fevers. Such being the usual progress in the degrees of morbid action in the organs involved in our fevers, we are not required to recognise local inflammation as *essential*, either for their production or for their continuance. Local inflammation often exists without fever: it often occurs as the consequence of fever; and we often have fever in which there is no evidence of the existence of inflammation, either as cause or effect. Besides, inflammation is not a primary but an ultimate degree of morbid action, and even when considered as the cause of fever, it might not be found an easy matter to establish the fact, that the febrile movement had been incited by the ultimate, and not the primary morbid action. Now, I wish it to be understood that the examples of the degrees of morbid action, which I have stated, are not confined to the organ which created the disturbance; nor does it necessarily pass through these degrees during the progress of the fever, but that through the intimate anatomical and physiological relations which exists among the different organs, many of them become involved and assume one or other of these degrees of morbid action, having had no direct agency in the production of the fever. Hence they should be regarded as non-essential, and as the result of adventitious influences. As the character of all these fevers is determined by the general predisposing causes which I have elsewhere shown, so it

is with the different organs involved, being the result of individual and general predispositions, and often of prevailing epidemic influences.

To enable us to trace the phenomena of these fevers as near as possible, through the order in which they arise, and to preserve as accurately as possible their relations, one to another, we will commence with those which result directly from the broken balance of the circulation, and the undue accumulation of the blood in the large venous trunks and cavities, which we recognise as *General Congestion from General Nervous Depression*. Having designated the lungs, heart and liver, as the points for the formation and the chief seats of congestion, we are bound to suppose that under the operation of general causes it would commence simultaneously at all those points, and consequently all the organs anatomically related which become involved, do so, at the same time. Passing by the general outward signs of the condition of nervous depression and congestion, the first organ which claims attention is the brain. Though this organ shares alike with other organs in the general loss of nervous power, and is often the seat of irritation and inflammation, it is never, as I have before shewn, the seat of congestion, except as the consequence of congestion in the lungs or the heart; consequently, whatever importance may be attached to that condition of the brain, (and I am not disposed to attach a great deal, from the fact that it is rather a mechanical than a pathological effect,) for its removal, we must look to the organs which gave rise to it. Congestion of the brain is not in itself a very dangerous affair, for occupying a closed cavity, it is subject neither to a very great increase or diminution of its proper quantity of blood, either of which would be apt to produce sudden fatal results, in cases of great general depression. This circumstance, which I have endeavored to explain elsewhere, enables the brain to continue in the exercise of its functions, often in a wonderful degree, amidst the general wreck and prostration of all other vital functions. Cases, however, often occur in these fevers, in which the action of the heart is sufficiently strong to throw an undue quantity of blood upon the brain, giving rise to more or less pain or uneasiness in the head, dullness of intellect, drowsiness, and not unfrequently to stupor and insensibility, which usually occurs suddenly as by an impulse. Now, these evidences of cerebral disorder, though not devoid of danger, are generally



more alarming than dangerous, for the reason that they imply no seated morbid action in the brain, and generally subside and pass away with the paroxysm. They cannot, however, be regarded with indifference, or without apprehensions of subsequent danger, as upon the establishment of the febrile stage of the disease, the brain would be more apt to become a seat of morbid action, and a state of irritation kindled up in the previously distended vessels, which might continue, in that character, through a succession of paroxysms, producing in each, headache, delirium, convulsions, and other signs of cerebral irritation, and, as has been explained, ultimately to spring up into a state of inflammation with all its direful consequences. I feel inclined to pause here, for the purpose of making some practical comments upon these different morbid conditions or states of action in the brain, knowing as I do, that they are too often mingled up and confounded, and that cases have been heroically treated (to the great detriment of other organs, and the system, generally,) as inflammation of the brain, which were but slight congestion or irritation, which would have yielded, and which did yield at once upon the arrest of the paroxysm. As this subject, however, must claim attention hereafter, I will proceed to enquire into the effects produced upon other organs from congestion of the liver.

Whether the liver is the *prime* seat of these fevers, (which I am inclined to believe, but which is not for us now to determine,) one thing I think is very certain, that it is more uniformly involved or complicated with them, than any other organ. Though it has been maintained upon high authority, that these fevers are of gastric origin, to which doctrine I cannot assent, much less that inflammation is essential to their production—I cannot deny that gastric disorder is a very common (though not an invariable) attendant upon them. Nor is it strange that it should be so, when we look at the character of the organ, its size, the extent of its mucous surfaces, the number of its bloodvessels, its extensive nervous sympathies, and the readiness with which it sympathises with other organs; yet it is strange what it can endure without evident disturbance, when we see it receiving large quantities of crude, heterogeneous, and apparently indigestible substances; besides, other strong and irritating substances, such as salt, vinegar, pepper, mustard, wine, brandy, hot tea and coffee, or ice-water, and sometimes physic—all with apparently the same degree of

impunity. Now, these things I will not attempt to explain, but there is one thing which I think their existence serves to show, namely, that the stomach is not so sensitive to first impressions, or ready to take on morbid action from the influence of general causes, as it is through sympathy, or direct communication with other organs.

The liver, which *may* become congested from congestion in the lungs and heart, being itself a point for the formation of congestion, especially in the portal circulation, when that organ and system is in that condition, has the effect of throwing the blood back, or damming it back to the organs whence it came, thus obstructing the flow of blood through the capillaries of those organs producing such a state of plethora, or mechanical congestion in them as occurs in congestion of the brain. The effect of congestion of the liver is, therefore, felt in all the abdominal viscera, (itself included,) and most of these being secreting organs, besides the effects or consequences which are likely to result from the obstruction, and the accumulation and retention of an excess of blood in their capillaries, in the establishment of irritation and inflammation in the manner already described, they have their functions thus mechanically interrupted, without having necessarily labored previously under any morbid action. The consequence of this stagnation and accumulation of blood in the vessels of the stomach, from both forward and backward pressure, is to create a sense of fulness and distress in that organ, sometimes pain, and often nausea and vomiting; indeed, so common are these things to our fevers, as to have lent support to the doctrine that they are of gastric origin. But observation has taught me that they seldom occur in fevers where there is *no* hepatic obstruction, and seldom or never fail to disappear when the obstruction is removed. As a consequence of the accumulation and stagnation of blood in the mesenteric vessels, from congestion in the liver, we frequently have, as a concomitant of these fevers, a serous diarrhœa from the percolation of the thinner constituents of the blood into the intestines, and sometimes when these vessels are in an unusual degree or state of atony, blood itself is poured out in such quantities as to be both alarming and dangerous. Besides the spleen, which we may suppose to suffer in the ratio with other organs, the liver only remains to be considered among those which furnish the chief pathological and characteristic phenomena of these fevers, and as

I shall have occasion more than once to refer to it, I will next examine into the effects of general congestion upon the constitution of the blood, and the consequences resulting from the changes thereby induced. Whatever changes may take place in the constitution of the blood from *excessive* or *defective* secretions, and the agency which such changes have in the production of these fevers, (which we suppose to be no little,) belongs to another branch of the subject; but, there can be no doubt that as cause or effect, the *stagnation* of the blood in these organs (whereby its elaboration and its depuration are both arrested or suspended,) acts injuriously upon the constitution of the blood, rendering it less fit for performing its offices, and sustaining the great vital functions depending upon it, and thus favoring the continuance or increase of general nervous depression. This change in the constitution of the blood consists chiefly in its defective and imperfect oxygenization, consequent upon the feeble respiratory movement, and pulmonary congestion, and in an increase of the carbonaceous products from the same causes, together with the suspended functions of the liver, which products are known to possess powerfully depressing influences upon the nervous centres. Having thus examined into the pathological condition of the principal organs and systems, as they may be supposed to exist in the *first* stage, and at the commencement of intermittent and remittent fevers, the next step will be to examine them in connexion with the *second* or febrile stage, which must necessarily be deferred until my next letter.

Before I close, however, it may not be amiss to say, that any cause which is capable of producing great and sudden depression in the nervous centres, can bring about a condition *similar* to that which I have described, such for instance as heavy blows upon the head, violent injuries, strong or violent passions and emotions of the mind, the action of deadly poisons, &c. But the depression and congestion thus produced will generally be sudden, evanescent and transitory, leaving no traces behind; while the depression and congestion of these fevers is generally the work of their predisposing causes, which have operated for a length of time, and though they may not be so *perfect* and *complete*, are always more *permanent* than when suddenly induced. The subject to be continued in my next.

Yours, sincerely, &c.,

SAML. D. HOLT.



## ARTICLE XXI.

*Is Phthisis Pulmonalis Contagious?* By I. J. M. Goss, M. D., of Jackson county, Ga.

This is a question that has engaged my attention and observation for several years. In examining the standard works, I find considerable discrepancy of opinion upon this, as I regard it, important subject. Dr. Dickson, in his manual of Pathology and Practice, says, "a large proportion of writers of the past and present age consider this disease communicable by contagion; and within my own observation, so many circumstances have occurred, which seem to confirm the doctrine, that with Cullen, I dare not assert, that consumption is not contagious."

Dr. Dunglison says, he has had no adequate evidence, that it can be extended in this manner; yet, says he, "singular instances of the kind have been related by different writers, and if they prove nothing more, they exhibit strange coincidences." In Italy the contagious nature of this disease appears to be admitted by almost all medical men. At Naples, when an individual dies of Phthisis, his house, effects and furniture are destroyed; or if his house is not destroyed, the walls are scraped and whitewashed, and the ceilings, floors and partitions removed. Similar views are entertained at Rome, where the disease is much more frequent than at Naples. "If," says Dunglison, "a person be constantly breathing the deteriorated atmosphere of the rooms, which the consumptive occupy, by sleeping perhaps in the same bed, the health may ultimately suffer, tuberculous cachexy be induced, and finally confirmed Phthisis." Dr. Bell does not admit that phthisis can be communicated by contagion, but admits nearly the same thing in substance, though not intentionally; he says, "unhealthy air, whether from closeness, humidity, or impurities, combined with other causes, is a common cause of the constitutional origin of tuberculous matter." In Spain and Portugal, the contagious nature of this disease is so universally believed, that the clothes of those who have died of it are burned by the civil authorities. Morgagni, so frightened at its contagiousness, never opened the body of one who died of it, but that he evinced great nervousness. Morton mentions this as a contagious disease. Elliotson says, "I do not believe that phthisis is in the slightest degree contagious;" but just at the top of the same page he says,

“we see a family, brought up with every care in guarding against cold,—having good food, good clothing, and good lodging, and attention paid to the slightest indisposition; and yet, one after another, especially if they be females, often become the victims of this disease.” This would go very far to prove the very idea, that he so flatly contradicts at the bottom of the page. He says, one is taken after another, and die, especially if they be females. This, it seems to me, may, with much plausibility, be accounted for in this way; one having a constitutional tendency to tuberculous cachexy, is exposed to bad air, as Dunglison says, or other external causes, and takes the disease; the others are in the room where he lingers out weeks, perhaps months, or even years of painful suffering; the air of the room, perhaps by close confinement, is kept in a contaminated state, and very soon after, if not before, the first dies, a second one perhaps is seen in the incipient stage of consumption. Now, Dr. Elliotson says, especially if the family be females; and why are females more predisposed to the disease than males? They are not as much exposed to the vicissitudes of atmosphere as the other sex, which is laid down at a common exciting cause of the disease, not only by him, but by most writers; but females are confined to the room to nurse, and soothe a brother’s pathway to the grave, or to palliate the sufferings of a sister, as she slowly declines by mental gloom and decaying lungs. Thus it is reasonable to account for the greater frequency of the disease in females, than in males (*ceteris paribus*). It seems quite plausible to me, that, if bad air has any agency in the production of a tuberculous cachexy, or that it tends even to excite, or call into action, hereditary or constitutional predispositions to the disease, that it, in the same way, would produce the disease when coming fresh from the lungs of a patient with phthisis, while it is so fully contaminated, not with the common impurities produced by atmospheric changes, that are admitted to be causative of phthisis, but with a more concentrated virus, the exhalations of tuberculous matter itself, imbibed from the diseased air cells as the air passes through the lungs. What the nature of the virus may be, I do not pretend to know, or what its *modus operandi*. I can only say, that if the theory of Broussais be correct, which is, that phthisis is disorganization, which is the product of inflammation of the pulmonary parenchyma—though this is denied by some writers, others contend that irritation or hyperæmia is con-

connected with tubercular formation and developement. I believe irritation to be the first step in the development of phthisis, which seems very presumptive, from the fact, that Bronchitis, or any other inflammatory disease of the respiratory organs, will hasten the development, or the fatal termination of this disease.

I have frequently seen Pneumonia, Pleuritis, Typhoid fever, and various other febrile and inflammatory diseases engrafted upon phthisis, which, as well as I recollect, invariably aggravated the disease. Some writers acknowledge that a chronic inflammation of the pulmonary tissue may be developed in the absence of any tuberculous tendency, eventuating in phthisis. It is generally believed, that certain employments may excite the disease, such for instance as stone grinding or dressing, and flint making. This fact is noticed in Berri in France, (a village,) where almost all the inhabitants follow the profession of making gunflints, and all of them die of phthisis, sooner or later. It is noticed too, that feather dressers, cotton manufacturers, needle grinders, labourers in coal mines and other dusty employments, seldom escape consumption, which cannot be attributed to any thing but to the irritation of the dust, consequent upon these employments. Climate has been always acknowledged to have influence in producing, or mitigating the disease, just in proportion as it was harsh and irritating, or mild and soothing. There is no climate entirely exempt from the disease; but there is a vast difference in countries in regard to the aggregate amount of cases of this disease, which is conclusive proof that a large proportion of the cases is produced independently of hereditary predisposition. I would ask, then, what can be the cause of so many cases among those who are employed in dusty situations? If it be not simply irritation of the dust, what can it be? Those thus engaged, generally are clothed and fed as other laborers of different occupations. I therefore conclude that irritation from dust in the air, as well as the harshness of cold, damp air, may be causative of this disease. I infer, then, if irritation be the first step in the development of the disease, it is quite reasonable to conclude, that the air, loaded with the virus exhaled from a tuberculous lung, may produce the irritation necessary for the production of the tubercle. So much for the plausibility, or possibility, of tuberculous contagion.

And now, I will give my reasons for my own suspicions of the contagiousness of this dreaded scourge of humanity. In 1843,



I was reading *Physic* in Harris county, Ga.; there lived a man in the neighborhood, whose lady was laboring under phthisis pulmonalis; she lingered for some considerable time, and finally died. Her husband, a stout and apparently healthy man, was necessarily confined to her bed-chamber closely in her last illness, soon took the disease, and in despite of all remedies, soon died also. This case, coming under my immediate observation, led me to notice many similar cases, that have since fallen under my particular notice. This man had no hereditary taint that I could find out, nor did he exhibit any scrofulous or tuberculous diathesis, that I could perceive.

In a village near where I now reside, a gentleman was laboring for several years under consumption, and finally died. His wife, who was confined to his chamber in his whole illness, soon took the same disease, and also died. She, too, was unknown to have any hereditary predisposition, as none of her progenitors had died with the disease, as I could learn.

Many cases, of a similar nature have been related to me, but I only give such as have fallen under my own observation. I have seen quite a number of families, that, one by one, would fall victims to this disease; these would not be allowed to be adduced in evidence, as an inherited predisposition might be supposed to exist; but they followed in such quick succession to the grave, that I have been led to doubt that hereditary transmission had more, if as much agency, in the production of the disease than contagion. There may have existed a tuberculous diathesis in some, or even all the members of the families thus observed, but why they should all appear healthy, and clear of any scrofulous tendency, until some one of the family took phthisis, is hard for me to account for, only by supposing that, if they had any predisposition to tuberculous nature, it was, by the contagious air of the sick room, brought into active development.

I am acquainted with a family, some members of which are now under treatment for phthisis; some have already died of the disease; none of them, I believe, was known to have any appearance of the disease, until two or three years ago, one of the family took it, and died; another, and another, until several have gone to an early grave—they followed in quick succession, three, I think, in one year. I know it may be, as it has always been said, that this was only an instance of predisposition; but why did these all en-

joy health until one of the family should die of consumption; then, in such quick succession, so many die in one family? There appears much plausibility in the conclusion, that if there really existed a hereditary tendency to the disease, that that tendency was, by some exciting cause, then brought into active development, to have produced the disease in several persons in so short a time.

I pen these observations to elicit the testimony of others of better opportunity. I hope that it will not be withheld on this highly important subject, and that correct information may be had.

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ARTICLE XXII.

*Sulphate of Bebeerine.* By ROBERT NEILSON, M.D., of Tuscaloosa County, Ala.

Sometime since, a friend sent me a few ounces of the sulphate of bebeerine, requesting me to test its power, and publish the result, if I thought it proper to do so,—which is my apology for placing this communication at your disposal.

The adulteration of quinine and its increasing scarcity, strongly demand the development of some other article to supply, if possible, its place. Occasionally an agent possessing some merit is brought forward, and with little trial, and still less accuracy observed, is discarded or placed under ban.

Such has been in part the history of the sulphate of bebeerine; mankind being ever prone to search for precedent, rather than endure the patient toil to discover things new and untried, prefer to take the views of the old world, than to call forth the energies of our native intellect.

I have experimented with several indigenous plants, but have found them inferior to the sulphates of quinine and bebeerine. The latter is inferior to the former in general application, but superior in some special conditions of the system. In cases of intermittent, prone to relapses, Fowler's solution is not more effective than bebeerine; or if diarrhœa attends them, its astringency and anti-periodicity are happily combined to arrest it. We do not intend, while now in its infancy, to place it side by side with quinine, but trust that whatever of merit it may possess, will be submitted to the closest investigation.

It is my opinion, that one reason why it has not been more approvingly noticed, is because its therapeutical application is not well understood. To succeed with any medicine requires a nice adaptation of its peculiar power to the diseased condition.

No skilful physician would think of giving opium in active inflammation of the brain, yet after depletion it may be highly useful. Thus, while the bebeerine possesses strong anti-periodic power, it is also astringent and slightly stimulant, I am satisfied from reason and actual experiment, that it cannot be exhibited successfully where inflammation or a tendency to it obtains. Nor can it be given during the paroxysm of fever without increasing vascular action; also, if exhibited in this stage it produces emesis, or nausea, to which it is more prone than quinine. It is more effective when used in the distinct remissions or intermissions of fevers, and hardly admissible during any other stage. It sometimes has an emetic effect, best obviated by combining with it some one of the tinctures of opium. Being soluble in water, I am accustomed to exhibit it in a solution of twenty grains to the ounce of water.

During the summer and autumn of the years 1854-5, I used the bebeerine occasionally in intermittents when relapsing, after quinine seemed to have lost its action, and generally with success. Pleased as far as I tried it, I determined to test its relative value as compared with other anti-periodics. Accordingly, twenty cases were treated with it, and the usual preparatory adjuvants,—seventeen of whom were cured, one (a case of tertian,) ran into the quotidian type, cured by quinine; the two remaining cases being threatened with gastritis, the remedy was abandoned, and they were cured in the usual way; but I am satisfied the bad symptoms were occasioned by over-eating. The case of quotidian type was a perfect failure under apparently favorable circumstances for its use.



*Remarks on the blending of Periodical and Continued Fevers.* By  
AUSTIN FLINT, M. D.

I shall preface some remarks on an interesting and important subject, viz: the blending of periodical and continued fevers, by the report of a case of disputed type by W. J. Chenoweth, M. D., of Decatur, Illinois. This report was received some months since by my esteemed friend and colleague in the University of Louisville, Professor Rogers, and was accompanied by a request that it be also submitted to my examination. It was designed for publication if deemed advisable. The writer is a young practitioner of much promise. I may add that its publication, with remarks, is at the suggestion of Professor R. The reader will perceive that the case was the occasion of a difference of opinion among a number of physicians who visited the patient during the progress of the disease. The difference was purely one of opinion, and Dr. Chenoweth states in a postscript, that having read the report to Dr. Trowbridge, who saw the patient in consultation oftener than the other medical gentlemen, he expressed satisfaction with it as giving a fair history of the case, although differing from Dr. C. as regards the nature of the febrile affection.

*A Case of Fever of Disputed Type.*

"The following is one of a class of cases which have occurred in this town and neighborhood, and which have been called remittent fever by some of our physicians, and by others, typhoid. Those of us who believe the disease to be remitting fever treat it with quinine, while those calling it typhoid fever prescribe opiates and stimulants. And inasmuch as the *name* of the disease carries with it different views of its pathology, and will almost necessarily govern the treatment, however guarded we may be, it may be useful to report a single case, so that physicians living in miasmatic districts may be led to give an opinion as to the disease and its treatment. We believe that the importance of being able to diagnose like cases is a sufficient excuse for laying it before the profession.

Sept. 23d, 1855, Rev. Mr. C. was attacked with a chill, followed by a fever. The chill and fever returned on the following day, and for three or four nights following he had "night sweats."

Sept. 30th he again had a chill. The next day he took ten grains of quinine, by the advice of a physician, and in a few days a dose of purgative pills. He had no return of the chill but did not feel well.

Oct. 7th. I was called to see him. I found him (in the forenoon) with a pulse 80 per minute; cool skin; eyes and surface of the body without capillary congestion; mind clear; bowels moved once the day before without medicine.

I ordered 12 grains of quinine to be divided into three doses, one to be given every three hours.

5 o'clock, P. M. Pulse 90; surface of body hot; cheeks flushed; restless and wakeful.

Directed to wash him in cool water.

Oct. 8th, A. M. Learned that he was awake until after twelve o'clock, when he fell asleep and rested until about seven. Pulse 78; much the same appearance as on preceeding morning.

Ordered quinine as on yesterday.

P. M. No apparent change since the same hour on the previous day.

Oct. 9th, 9 o'clock, A. M. Has been up for half an hour and has just got to bed. His breathing is a little more labored, but otherwise symptoms as on yesterday. His tongue in the forenoon has been moist, in the afternoon dry. It has been covered with a white fur, and has had a red spot at the tip. He has had liquid stools once or twice daily.

I did not see him in the afternoon of the 9th, but learned that although the paroxysm returned as usual at one o'clock, he was not quite as restless.

Oct. 10th. Very little difference in the symptoms from those present on previous days in the forenoon.

No treatment.

6 o'clock, P. M. Pulse 90; quite restless, (throwing his arms about and changing his position in bed;) skin hot; had been dozing a little and imagined he had a body of soldiers at his command, and gave them orders.

Oct. 11th. I called in my partner, Dr. Trowbridge. Pulse 84; breathing regular, but labored; tongue coated and dry; eyes clear; a slight defined redness on both cheeks; skin cool; has had as many as three or four brown colored evacuations during twenty-four hours.

Dr. T. thought the case was probably typhoid fever, but agreed to let him take 15 grains of quinine, divided into three doses. The medicine was left, but as the patient refused to take it, he had no treatment.

P. M. Pulse 96; skin hot and dry; stupid and restless; face sallow; tongue red in the middle.

At Dr. T.'s request we gave him brandy in small quantity, with orders to discontinue it if he was more restless, and substitute Dover's powder, three grains every two hours.

Oct. 12th, A. M. We learned that he had taken the three Dover's powders before he obtained sleep; but as this was at midnight, and he generally fell asleep and rested until morning, we did not know what credit to give to the medicine.

Dr. King was called in consultation, Oct. 13th, and advised to give quinine, but it was not given on account of difference of opinion, until the next day. The symptoms were about the same

as on the 12th, except that about daylight he is reported to have sweated.

Oct. 14th. Drs. King and Kellar saw him with Dr. T. and myself. Little, if any, difference in symptoms.

Dr. Kellar proposed to give him valerianate of quinine, which was agreed to by Dr. King and myself, thinking that the difference between that and the sulphate would not warrant us in declining to concur in the proposal. We ordered five grains three times a day.

Oct. 15th, 5 o'clock, P. M. Pulse 80; skin hotter than natural; somewhat deaf; drowsy; talking in his sleep; tongue red in spots, where the coating has fallen off; vomited once, water and bilious matter.

Oct. 16th, 9½ o'clock. Pulse 72; has been sweating for half an hour; two rhubarb colored motions since yesterday.

6 o'clock, P. M. Pulse 84; skin dry and hot; paroxysm of fever returned at four instead of one o'clock as previously.

Oct, 17th, 8½ o'clock. Pulse 78; eyes look well, no disposition to stupor; bowels moved once; a slight appearance of sordes on the teeth.

No medicine.

10½ o'clock, A. M. We were sent for under the impression that he had a chill. Mrs. C. had found his hands and feet cold, finger nails blue, and said that he was shivering; when we arrived his skin was rather hot, but he drew the bed clothes around him, and was evidently cold. This chill (or as Dr. T. preferred to think, nervous tremor,) lasted three-quarters of an hour. He then threw off part of the bed clothes, and appeared to be quite warm.

6 o'clock, P. M. Pulse 72; mind clear.

In consultation I declined to give brandy, and persisted in giving him 20 grains of the sulphate of quinine (divided into three doses) between twelve o'clock at night and daylight. He had taken on the 14th, 15th and 16th, fifteen grains of the valerianate each day.

Oct 18th, 9 o'clock, A. M. In a profuse perspiration; pulse 72; mind clear; bowels moved once since yesterday; tongue dry; (he has kept his mouth open, asleep and awake, during his illness.)

3 o'clock, P. M. Not sweating; otherwise as in the forenoon.

Oct. 19th, A. M. Pulse 72; mind clear; bowels not moved since yesterday; tongue moist, covered with a light fur; says he is a good deal better.

Oct. 20th, P. M. Had a slight paroxysm of fever at one o'clock.

Nov. 1st. Has been convalescent since I last saw him, and is now able to be up half of the day; wishes food, and complains only of muscular debility.

He has had a small red pimple on the neck, elevated above the surface, and disappearing under pressure; another under the right nipple; a third a little to the right of the median line over the



stomach; and between these last, two or three not so well defined. His wife says that mosquitoes have been abundant, and also that there have been fleas about his bed. I could not say that they were not the characteristic rose spots of typhoid fever.

We have been looking at the case from different stand-points, and have called in other counsel, (as the minutes will show.) One of them, Dr. King, saw him several times. He has practiced in this town and neighborhood for sixteen years. He agrees with me. Dr. Kellar, who has practiced here for three years, and Dr. McBride, just here from Ohio, (neither of them saw the case but once,) unite with Dr. Trowbridge in calling it a case of typhoid fever. As the case was under my care, and as Dr. King concurred with me in opinion, I persisted, as the notes show, in giving quinine in liberal doses. Dr. Keller preferred the valerianate, and we therefore gave it. Drs. Towbridge and McBride declined giving the treatment their approbation.

The grounds for calling the disease typhoid fever were—

1st. Its continuance after the use of quinine, on the 7th and 8th—assuredly not an uncommon thing in remitting or even intermitting fever.

2d. The tongue was coated and dry in the middle. Dr. Flint does not think that the tongue furnishes any positive criterion of the disease.

3d. He had diarrhœa. This is not an uncommon event in ague, and is common in remittent fever, after the use of purgative medicine.

4th. On the 17th there was a slight appearance of sordes, a symptom acknowledged to exist in the typhoid condition occurring in remitting fever.

5th. There was capillary congestion. This was more intense in the afternoon, and presented a dull but defined appearance. His eyes were always clear, until convalescence was established, and then never congested except after sleep.

6th. He was stupid. This was not noticed until on the forenoon of the 12th; he had then been in bed for six or seven days, and the disease had evidently increased, and we may easily account for the stupor by congestion of the brain.

7th. He was deaf. He had taken a good deal of quinine.

8th. He had red spots on his neck and abdomen. My reason for not believing they were the characteristic spots of typhoid fever are hinted at in the report of the case.

The reasons for believing the case to be remittent fever are the following:

1st. The attack was preceded by intermittent paroxysms, recurring regularly on the seventh day after it was arrested, as is common in ague.

2d. There was a regular exacerbation, commencing at noon and

lasting until midnight. Oct. 7th, 8th and 9th, there was almost, if not quite, an intermission in the forenoon.

3d. The fever ended with a chill.

4th. There was no epistaxis.

5th. There was no tympanites."

Decatur, Ill., Nov. 5th, 1855.

W. J. CHENOWETH.

The following note, written subsequently to the following report, has an obvious bearing on the question as to the diagnosis:

"DEAR DR: The person whose case I recently reported to you, moved on Saturday last, Nov. 10th, to a new house, freshly plastered, (the room in which he slept was dry, but the next room was quite wet.) On Sunday he ate a small quantity of milk, (his appetite was good,) and in about half an hour he was seized with considerable pain, which he referred to the head of the colon. Injections were given, and two motions produced. He was then given opiates, but the pain continued. On Tuesday evening his bowels were tympanitic, and on Wednesday he died.

I suppose his death was not connected with his first attack as a sequence, but I think it necessary to mention the fact. He was able to walk about, had an excellent appetite, and bid fair to be entirely healthy, but was cut off at a time when hope had well nigh resulted in certainty.

Respectfully,

Decatur, Nov. 15, 1856.

W. J. CHENOWETH."

REMARKS.—Having introduced the foregoing report, an opinion respecting the diagnosis will be expected by the reader as well as the reporter.

I need not say that, in discriminating between diseases which may have many points in common, the data contained in a written description, however complete this may be, are much less satisfactory than the evidence afforded by personal observation. The account of the case, as given by Dr. Chenoweth, was undoubtedly prepared with a disposition to state the facts fairly, and in a truth-seeking spirit.

The circumstances, however, under which the phenomena were observed, and the history related, are such as to render it extremely difficult to divest the mind altogether of bias, and therefore the confidence of the author in the correctness of the position which he was led to take early in the progress of the disease, must not be taken into account in forming an impartial judgment concerning it. There are certain points on which it were to be desired that the report had been more full and explicit, viz: the condition of the abdomen as respects meteorism, tenderness, and gurgling; the state of the mind; the presence or absence of cough, and the bronchial rales; the period when the spots were observed, and a more minute description of their physical characters.

Judging from the symptoms detailed, and taking into view the occurrence of fatal peritonitis, probably from intestinal perfora-

tion, during convalescence, I must think that the evidence decidedly preponderates in favor of the conclusion that the disease was typhoid fever. It is much to be regretted that the autopsical appearances could not have been ascertained. These, in all probability, would have sufficed, in connection with the *ante-mortem* history, to determine positively the diagnosis.

Occurring, however, in a malarious district, the case presented certain symptomatic events which belong to periodical fever, and which rarely enter into the symptomatology of typhoid fever as observed in parts of the country where intermitting fevers do not prevail. I refer more especially to the recurring febrile paroxysms preceded by chills, which characterised the early part of the history of the case, and the occurrence of a single paroxysm at the termination of the disease. We have then, in this case, apparently an intermingling of the events pertaining to both typhoid and remittent fever; and Dr. Chenoweth states that the case was one of a class of cases observed in that town and neighborhood, which were regarded by some of the physicians as cases of remitting, and by others typhoid fever. Now, is it not probable that there, and in other situations where periodical fevers prevail to a greater or less extent, the two forms of fever, viz., periodical and continued, may be blended, giving rise to a hybride affection, the phenomena of either species being manifested in different cases in varying proportions? It is with reference mainly to this question that I have introduced this case of disputed type of fever, and to this question the remainder of my remarks will be devoted.

With the present amount of positive knowledge bearing upon it, this is a speculative question. We have not data on which to base a definite answer. The question can only be answered definitely by historical facts, which it will require not a little time and labor to collect. We are not to prejudge the result of analytical investigation by conclusions which may be hypothetically rational. Nevertheless, here, as in other instances, a discussion professedly on rational or speculative grounds is legitimate, and may be useful by exciting and guiding the researches which will either confirm or disprove the suppositions.

Let us clearly understand what is involved in the hypothesis of the blending of periodical and continued fevers. It is a matter of common observation, that in remitting fevers the occurrence of remissions frequently ceases after a time, and the febrile movement becomes continuous. It is not, however, on this account regarded as nosologically transformed into continued fever. Practitioners, it is true, often speak of remitting terminating in typhoid fever. But this is a loose mode of expression, which has given rise to not a little confusion. The remittent fever puts on more or less of the external characters which belong to typhoid fever; or, in other words, the patient lapses into a typhoid condition common to a variety of affections.



This is all that can with propriety be said, and yet the pertinacity with which many who are not over nice in pathological distinctions, insist on the *conversion* of the one form of fever into the other, is a significant fact to which I shall have occasion presently to refer.\* The two forms of fever are, in fact, reckoned distinct genera of the *pyrexia*. It may be logically, although not demonstratively proved that each proceeds from the introduction into the system of a special cause; that this morbid agent, or poison, in either instance, is capable of producing a certain definite series of morbid results, which, in the one case, give rise to the characteristic symptomatic phenomena of periodical, and, in the other case, to those of continued fever. The two genera are, therefore, considered as essentially distinct from each other. The poison improperly called *marsh miasmata* is capable of producing the species of fever called intermitting and remitting, and these only; while the special cause of typhoid fever, be it the matter of contagion, or not, will give rise to the species of fever last named, and none other. Now the question is, may these two different morbid agencies act in conjunction within the organism, the processes peculiar to each going on simultaneously, and consequently giving rise to an union of the symptomatic phenomena peculiar to each?

The affirmative answer to this inquiry by no means involves a pathological absurdity. The old doctrine that two diseases cannot co-exist in the same place and time within the body, is now obsolete. Observation has abundantly established that two essentially distinct fevers may run their respective courses simultaneously. Scarlet fever has repeatedly been known to be thus associated with measles and with small pox.† The supposition, then, that periodical and continued fevers are capable of being blended, is sustained by analogy.

The special cause of periodical and continued fevers are alike impalpable, inappreciable. In the present state of medical science we can only study their pathological effects. We argue for the distinct specific character of these causes from the uniformity and peculiarity of the effects. This being so, the evidence in behalf of the blending of the two diseases must consist in the union, under

\* The *conversion*, as distinguished from the *blending* of fevers, is a point which I shall not discuss. The reader is referred to an able article entitled the "blending and conversion of types in fever," from the pen of Prof. Dickson, of Charleston, S. C., contained in the Transactions of the American Medical Association, Vol. V., 1852. Prof. D. shows very clearly the improbability of a conversion of one species of fever into another, in the literal sense of that term. Two diseases, so special in their character, and so distinct as regards their phenomena and their causation as different species of essential fevers, in a certain sense become merged into each other by being blended, but it is not likely that either in reality parts with its individuality, or, in other words, that an actual metamorphosis occurs of the one into the other.

† For a collection of facts, from different sources, in support of this statement, the reader is referred to a note in Gregory on the Eruptive Fevers, by the American editor, Dr. Buckley, page 344.

certain circumstances, of the symptomatic characters of the two kinds of fever. I have already alluded to the fact so well known to physicians who reside in districts termed malarious, that cases of remitting fever frequently not only fail to preserve during the career of the disease remissions, but present many of the distinctive traits of typhoid fever; and, hence, it appears to the medical observer to be a matter of common sense that the former undergoes a *conversion* into the latter. Is it not reasonable to suppose that in these cases there is actually a combination or blending of the two diseases, albeit the diagnostic criteria by which they are discriminated from each other are sufficiently constant and reliable to enable the practitioner to make the distinction practically in the vast majority of cases?

I am disposed to advance a step beyond an affirmative answer to this question, and to ask whether it be not a rational view of remitting fever to regard it as always involving a blending of the intermittent and the continued. Why do we have in malarious districts, in certain instances, remitting instead of intermitting fever? It is not owing to the greater abundance of the so-called malarious poison, or its greater virulence, as was imagined by Dr. Eberle, for intermitting fever may be as pernicious, in other words, as severe and fatal as remitting fever, and it is fair, other things being equal, to measure the quantity and potency of the special cause by the degree of the specific effects. The specific effects of the malarious poison are intermittent febrile paroxysms, more or less complete and intense recurring at regular intervals. In remitting fever an additional pathological element appears to be involved—two separate affections, viz, a continued and a paroxysmal fever, are united. The disease is a hybrid.

This theory is favored by an inference from a well known fact, which I do not recollect to have ever seen cited for that purpose. The fact to which I allude is the indigenous developement of typhoid fever, more or less abundantly, in different portions of our country, directly intermitting fever disappears, and the infrequency or absence of well marked cases of the former so long as the latter form of fever prevails. This fact has been observed in the locality in which I now write by those who have resided here for the last twenty or more years, and it is a fact which has arrested the attention of observing practitioners in various sections.\* Now is it probable that the special cause producing typhoid fever is not developed, or is deficient, in miasmatic districts precisely so long as periodical fever prevails, and that, as a rule, it starts into existence or becomes more abundant just as the latter form of fever disappears? Essentially distinct as are the two poisons, why should the one, in this way, supplant the other? Is it not almost absurd to suppose that the *typhoid* poison, as it were, obsequiously stands

\* For a collection of testimony relative to this point, the reader is referred to Bartlett's Treatise on Fever. Edition of 1847, page 108 *et seq.*

aside for *marsh miasmata*, and patiently waits the departure of the latter before presuming to take its place, and assert its rank among the grand morbid agencies of nature! On the other hand, is it not more reasonable to suppose that in districts at one time abounding in periodical fevers, in which subsequently typhoid fever becomes the prevalent form of febrile disease, the special causes of both were at the same time indigenous, and that the association of the two poisons in different relative proportions, gives rise to an union of intermittent and typhoid fever, the phenomena of either predominating according to the relative quantitative proportion of the efficient causes?

The speculative character of these remarks was conceded at the outset. The blending of periodical and continued fevers, either occasionally in cases of the former, which exhibit in a marked degree more or less of the characters belonging to the latter, or uniformly in cases of remitting as distinguished from intermitting fever, is to be established, or otherwise, by evidence more solid than that pertaining to the considerations just adduced, and others of a kindred character. These considerations claim attention only as suggestive of an interesting and important subject for scientific investigation. What are the requisites for an investigation directed to the points which have been raised? A few words with reference to this inquiry.

Bearing in mind our ignorance of the special causes involved in the production of both forms of fever,—of their nature and origin as well as the primary and essential morbid processes to which they give rise when they are introduced within the organism; it is plain that the supposition of their conjunctive operation is to be proved or disproved by the analytical study and comparison of their appreciable phenomena, that is, the symptomatic characters of the two kinds of fever. The data for this method of investigation are yet to be acquired. The natural history of continued fever, so far as concerns the species now known as typhus and typhoid, is pretty well ascertained. These fevers have been carefully studied by means of the analysis of recorded cases in different countries. As much cannot be said of periodical fever, especially the species or variety called remitting. The natural history of this fever cannot be considered as satisfactorily settled on the basis of that of the two species of continued fever just mentioned. Great as are the opportunities in various parts of this country, and in other countries, to collect recorded cases of remitting fever for analysis, it remains to accomplish for this disease what the labors of Louis, Gerhard and others, have done for typhus and typhoid fever. Something has been contributed toward an end so desirable by Stewardson\* and Alfred Stillé,† but the materials gathered by these distinguished

\* Analysis of twenty cases of remitting fever in the Amer. Jour. of Med. Sciences, April, 1841, and April, 1842.

† Analysis of ten cases of remitting fever recorded by Dr. ———, of Baltimore, by Alfred Stillé, M.D., of Philadelphia, April, 1846.



physicians, although valuable, are not sufficient. What a tempting field is here open to the clinical observer and historian! But of how many diseases may this be said? "Truly the harvest is great, but \* \* \* \* \*"

The results of the analysis of different collections of recorded cases of remitting fever in different situations, including districts in which typhoid fever is seldom or never seen, and those in which it has become more or less prevalent, will establish the points pertaining to its natural history which distinguish the former from the latter; and by bringing these results together and comparing them with each other, it will be seen whether remitting fever maintains uniformly certain characters essentially distinct, or whether in proportion as cases of periodical fever disappear, and cases of continued fever succeed, the symptomatic phenomena of remitting fever manifest a transition to typhoid, showing a gradual predominance of the characters of the latter until those of the former are finally lost.

According to the general impressions of observing practitioners who have seen more or less of the disease, the descriptions by various authors, based on unrecorded experience, together with the results of analytical investigation (as yet far too limited) of recorded cases, certain differential characters of remitting and typhoid fever are generally sufficiently marked to serve as diagnostic criteria. It is, however, admitted that in a certain proportion of instances a positive discrimination is not easily made, especially in cases not observed from the commencement of the disease; and it is perhaps not incorrect to say that in certain situations it is oftener difficult to determine whether the disease be typhoid or remitting fever than to distinguish typhoid from typhus fever, in places where the two latter diseases prevail. As already stated, it is a matter of common observation that the symptoms generally characterised as *typhoid*, such as low, muttering delirium, a dry furred tongue, *sordes*, etc., are not infrequently developed in the course of remitting fever. The points to be settled are, to what extent are the characters considered as distinctive of each form really entitled to be regarded in this light, and of the characters which are truly distinctive, what significance or importance do they possess as representatives of the essential nature of the disease. Take for example the abdominal symptoms which belong to the natural history of typhoid fever, viz., diarrhœa, meteorism, tenderness, gurgling. These are undoubtedly wanting, as a rule, in cases of remitting fever; but are they not present in a certain proportion of cases, and if so, in what proportion? Again, complementarily to the inquiry just made, are the intestinal lesions supposed to be characteristic of typhoid fever, ever found in cases which, irrespective of their existence and of the presence of the symptomatic phenomena associated with them, would be entitled to be called cases of remitting fever? A statement to that effect is positively made by a distinguished

teacher and writer;\* can it be substantiated by evidence adduced by the analyses of recorded cases? The same interrogatories may be applied to the eruption, and to other diagnostic events which are of more or less significance and importance in their relations to the essential or special nature of the disease. When these points are settled, as they may be, and as they alone can be by the accumulated results of numerous analyses of recorded cases, then we shall be prepared to bring logical proof for or against the doctrine that remitting fever, either occasionally or habitually, involves a blending of the special causes and essential pathological processes pertaining to the periodical and continued fevers.

In the mean time indulging, as we may do, theoretical views, (provided they are not permitted to engender pre-conceptions which will blind the perception of truth,) this doctrine is sustained by cogent considerations, and explains satisfactorily well known facts. Variation in the relative proportion of the *periodical* and the *continued* causative and pathological elements, serves to account for certain palpable differences in cases of remitting fever. We can understand that in proportion as the former elements predominate, the character of the disease will approximate to that of intermittents; the febrile exacerbations will approach to paroxysms, and the career of the disease will be arrested by anti-periodic remedies. On the other hand, the predominance of the latter elements will proportionately give rise to the phenomena which are characteristic of typhoid fever, in addition to continuity in the febrile movement. These are the cases which resist the sulphate of quinia in large doses, and which sometimes perplex even the accomplished diagnostician.

In the same way we may account for a fact which might be cited as tending strongly to sustain the doctrine. I refer to the prevalence of remitting fever in malarious districts during seasons when cases of intermitting fever are comparatively unfrequent, and *vice versa*. It is well known that the two forms of periodical fever (intermitting and remitting) do not observe any law of relative proportion in their concurrence. In one year intermitting fever may be rife, and remitting fever be rarely observed, while in another year remitting fever is abundant and intermittents not usually prevalent. Now, is this fact consistent with the notion that remitting fever involves the same special cause, and that only, which produces intermitting fever? Is it not, on the other hand, more consistent with the supposition that two special causes are conjoined, viz., that which is called marsh miasma and the typhoid poison? Adopting this supposition, when remitting fever preponderates, the typhoid poison has the ascendancy. Under these circumstances, were the district not malarious, there would be an endemic of pure typhoid fever. But when intermitting fever is the prevailing form,

\* Prof. Dickson, in his paper on the "Blending and Conversion of Types in Fever," already referred to.

the special cause of a purely periodical fever abounds, unattended by the typhoid poison.

In conclusion, the doctrine in behalf of which these few discursive remarks are offered, simply assumes that the special cause of typhoid fever\* is not restricted, geographically, to territory free from periodical fevers, but existing in miasmatic districts, is associated in its morbid manifestations to a greater or less extent, with the phenomena due to the special cause of periodical fever, and, thus associated, gives rise to remitting fever, which is therefore a hybride affection. This, in reality, is only an extension to continued fever of a fact to which the experience of all practitioners residing in malarious districts will testify, viz: that, in general, the various affections originating in these districts are liable to receive important modifications from the conjunction of the malarious poison.—[*Buffalo Med. Journal.*

#### *Form of Metamorphosis of Nerve and Muscle into Areolar Tissue.*

A paper with this title appears, by Dr. Billroth.† After alluding to the observations of Blunnette and Schröder van der Kolk, on the changes which muscle and nerve undergo in the neighborhood of carcinoma, he goes on to speak of this change occurring, not as a specific carcinomatous degeneration, but essentially as a transformation of the muscles and nerves into areolar tissue. In hard carcinoma of the breast it unites intimately with the fascia of the pectoral muscles, and this again with the muscular substance itself, so that the muscle is drawn into the mass, and from the first point of growing together is arranged in a radical direction. One still distinguishes the fascia a long time after this growing together has taken place; but at a later period the tissues form such a firm cicatrix that one can, neither by the naked eye nor microscope, distinguish any of the original elements. The muscle passes right into the tumour, loses its dark red colour, and at last assumes a white glittering colour, but often the bundle-like arrangement is preserved. The like occurs in cancer of the lip. In investigating microscopically these spots of transition, a very careful tearing is required. First of all, a number of small cells and nuclei come into sight, and the muscular fibre is found to be very brittle, easily tearing transversely where the fibres immediately pass into the carcinomatous cicatrix, but one seldom can follow a free fibre very far. The muscular fibre first becomes less cross-striped in places assuming a more homogeneous and stringy appearance, and at the same time a new formation of tolerably dark oval nuclei arises in or under the sarcolemma of the fibres, which takes on a completely homogeneous glittering look. Whilst

\* I limit this statement to typhoid fever, inasmuch as this is the species of continued fever chiefly indigenous in this country.

† Virchow's Archiv., p. 260. July, 1855.



this change is progressing, new cells are formed between the fibres, and the tissue becomes so coherent that single fibres can only seldom be recognised, and the substance thus formed is no longer cleavable like muscle, but friable. The newly-formed nuclei compress the muscular substance, and afterwards appear to dwindle as the substance arising from the metamorphosis becomes much less nucleated than it was during developement. The fore-mentioned process is the one most frequently met with, but yet there are many variations; for instance, the fibres may maintain their breadth, losing their cross-stripes, they may assume a fine punctuate bright appearance, with only a scanty formation of nuclei. In other cases the covering is filled with such a mass of nuclei that it appears as if the muscular substance passed into the new formation, and perhaps itself served as material for new formation. But these forms are seldom proportional, and may possibly be a deception, as this material does not correspond to single fibres, but only depends upon the coherence of the nucleated and cellular material deposited between the muscular fibres, which on mechanical grounds also assumes a cylindrical form. Along with these nuclei one sees a good number of fine spindle-cells, unaffected by acetic acid, which must be regarded as proceeding out of the cells deposited between the muscular bundles. This metamorphosis of muscular fibre is not peculiar to the neighborhood of cancer. The author relates a case of a boy, part of whose lip was excised in the Berlin Hospital, for the removal of a tumour, and the labial muscles adhering, the rete was found to be metamorphosed into strong nucleus-holding areolar tissue and elastic fibres. In other cases, such as the diffuse cavernous tumours, the transformation of muscle into areolar tissue may be seen.

Just as it is with muscular fibre, so do nerve fibres pass into a kind of matrix, whilst elongated nuclei form in their sheaths. A firm cancer was removed from the mamma. It had grown into the pectoral muscle, which was removed with it. At the place of transition of the sound muscle into the tumor, in a portion kept in acetic acid for twenty-four hours, an abundance of nerves more clear and numerous than usual was seen. In a thick nervous trunk, raylike extensions of the primitive fibres in a lateral direction were seen which, partly single, and partly united with small secondary branches, proceeded into the muscle. Here and there the bright-dark contours of the primitive fibres were seen, but for the most part the nerve substance had passed into a kind of matrix, and only a row of nuclei placed alongside each other indicated the original course of the fibre. One clearly sees in single places that the nuclei were imbedded in the sheaths of the nerve fibres, which were also in great part destroyed by reagents. This degeneration was advanced also in the neurilemma of the larger nerve branches. Our author considers that the pain often felt in cancer of the mammæ arises from the above-described new for-

mation of nuclei in the sheaths of the primitive nerve fibres by which the nerves are manifestly exposed to great pressure; and this the more likely, as the cancerous growths are almost free from nerves themselves. Probably something of this kind occurs in the fibroids of the skin and periosteum. The substance resulting from the above degeneration of the muscles and nerves become brittle, and swells up on maceration in weak acetic acid, as also in weak alkalis, being therefore not completely analogous to ordinary areolar tissue.—[*British and Foreign Med. Chir. Review.*]

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*Progressive Atrophy of Muscular Fibre.*

Virchow\* relates at length a case of a man, aged forty-four, who was affected by progressive muscular atrophy. He had been affected, when aged twenty-one, with almost complete lameness of the extremities, supposed to be of rheumatic origin. His father had been similarly affected when aged forty. In this case the lameness began in the leg and spread upwards. The intestines and urinary bladder remained natural until his death. The muscles of the extremities were very emaciated, and of a pale reddish-yellow colour, some being entirely degenerated. Under the microscope they exhibited areolar tissue and fat-cells containing granular material, partly corresponding to the old muscular bundles in an uninterrupted way, partly not so. In some muscles the microscope also showed the presence of slender vesicles of 0,000—0,01 millimètres broad, containing very small fat corpuscles. Here and there were elongated nuclei, and in some places small round nuclei, showing a double contour on addition of acetic acid. These were partly single and partly heaped together from 2 to 7 in number, partly in files. These vesicles at times appeared quite isolated, with round extremities, and many had a more caudate character. In other places, where the muscle was redder in colour, the vesicles were broader, containing more numerous granules, mostly oval, and of 0,075 millimètres in length. The signification of these structures was difficult to decipher. Often there were evident fat-cells, surrounded by a membrane entirely uplifted from the fat drops, and with an oval nucleus. Areolar tissue bundles existed, with spindle-shaped very delicate corpuscles, which were mostly connected at their extremities; also spindle cells, broader, and filled with fine fat granules, which gradually became larger, and finally pass into large oval cells, containing large fat drops as well as the fine granules.

Finally, there were decided fat cells, only differing from ordinary ones in that along with a large fat drop they contained many smaller ones. Hence it appeared to Virchow that a new formation of fat-cells had taken place out of areolar tissue corpuscles.

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\* Virchow's Archiv., p. 537. Oct. 1855.

Where the muscle was still more unaltered, the primitive bundles were delicately pale, with finely granular contents and incomplete striæ. The arteries of the diseased muscles had fine granular fat in their walls. The nerves contained less fibres than usual, and on longitudinal as well as transverse section very broad intervening spaces were seen occupied by a very richly nucleated tissue; the nuclei were long, delicate, something pointed, almost like nuclei of organic muscle fibre, and in every direction much finely-granulated fat existed. The various nerves did not appear atrophied to the naked eye.

The spinal marrow, as well as the roots of the nerves, were healthy in look, but on section, even to the naked eye, a remarkable variation was seen, beginning at the upper cervical region and proceeding downwards, becoming gradually more marked, and most remarkable about the lumbar swelling. In all these places one saw in the posterior fibres of the chord, and more decidedly, near the posterior longitudinal fissure, a clearish grey, somewhat translucent mass, instead of the white nerve substance, which so extended into the under part of the medulla as to reach the posterior horn of grey substance. Here it so united with the grey matter that an obvious limit could not be seen. In general the degeneration began at the posterior longitudinal fissure, and proceeded thence into the substance of the posterior fibres. As seen by the microscope, only the posterior fibres, and not the horns, were affected. The change was of the same nature as that in the peripheric nerves, only that some broader nerve-fibres existed grouped together, which on transverse section were separated from each other by a distance of 0,005 to 0,012 millimètres. Between them existed a very soft friable granular material, containing thickly-strewed corpora amylacea, and also many granulated nuclei, chiefly oval, and here and there enclosed in round elongated cell membrane. No fat was visible, and the bloodvessels had a natural look. On the addition of chromic acid, instead of finely granular substance, much shreddy firm and fine fibrillated material was seen.—[*Ibid.*

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*On Jugular Venesection in Asphyxia, Anatomically and Experimentally Considered.*

A paper on this subject was read before the Medico-Chirurgical Society of Edinburgh (March 19th, 1856,) by Dr. Struthers. The object of the paper, which was illustrated by preparations and drawings of the valves in the cervical veins of the human subject, was to ascertain whether distension of the right side of the heart could be relieved by opening the external jugular vein in the human subject. The experiments of Drs. John Reid, Cormack, and Lonsdale, had satisfactorily shown that, in the lower animals (dogs, cats, and rabbits,) the right side of the heart could be thus



discharged so as to restore its action, which had been arrested by a simple mechanical cause, over distension. He considered that the indication of restoring the heart's action by jugular regurgitation, had not received that attention which Dr. Reid's suggestive paper demanded for it. Dr. Struthers described the anatomy of valves which he had found in the cervical veins, as well as those usually alluded to as present in the external jugular. A pair of valves at or within the mouth of the internal jugular vein; a pair in the subclavian vein immediately external to the point of union with the external jugular; a pair at or within the mouth of the external jugular; a second pair in the course of the external jugular, at the upper end of its sinus, or large portion, about  $1\frac{1}{2}$  inch above the clavicle, and various lesser valves at the mouths or within the tributaries of the external jugular. The varieties, and relative position of the two portions of each pair of valves was described, as he had found them in numerous careful examinations. With the view of ascertaining whether regurgitation could take place notwithstanding these valves, Dr. S. performed a series of experiments on the dead subject. A pipe was fixed in the femoral vein, and tepid water thrown freely upwards. The general result was, that the external and other jugular veins very soon became distended, and that when the lancet opening was made, at about an inch above the clavicle, the fluid regurgitated freely. At first a jet came, emptying the distended sinus, and then it continued to flow, never in a jet, but in an active stream across the neck, escaping by the wound with a wriggling motion, evidently due to the obstruction offered by the valve which it had overcome. Care was taken to ascertain that the fluid came by regurgitation, not from above; but, if allowed, it also came freely from above, having ascended by the internal jugular. The introduction of a probe so as to hold aside the guardian valve of the external jugular did not much accelerate the regurgitating flow. When the catheter was introduced, however, the fluid came very freely by it—as freely as from a distended bladder. It is easy to introduce a common male catheter to the vena cava or right auricle, by directing it backwards and inwards, as well as downwards, from the point of venesection. But as soon as the catheter has entered the subclavian vein, the fluid comes as freely as when it is pushed farther. As soon as the point of the catheter is withdrawn into the external jugular, the fluid ceases to come by it. In one subject the fluid could not be made to regurgitate. This was at the time attributed to the circumstance that the cranium had been opened for the removal of the brain, the fluid pouring out by the cranial sinuses; but, on dissection, two pairs of valves were found in the external jugular below the lancet opening, besides the pair above it, as usual. Regurgitation seems to be prevented by two pairs of valves, though one may be overcome. In these experiments the veins of the arm did not become distended, and no re-

gurgitation took place from a lancet-opening in the axillary vein, although afterwards it was seen that only two pairs of valves had stood in the way, between the heart and the opening. By "pair," Dr. S. meant the two separate portions which act together as one valve. He (Dr. S.) drew the following conclusions: 1. No venesection can be of any use in asphyxia, except in the neck, on the principle of regurgitation; which, however, may also relieve congestion of the head. 2. That, besides warmth and friction, and (the most simple and effectual of all means,) continued artificial respiration by alternate compression and relaxation of the sides of the chest, jugular venesection should be tried. 3. With reference to Dr. M. Hall's recent recommendation of the prone position, to prevent the tongue falling back and closing the glottis, the question occurred—Does the tongue fall back, under passive circumstances, in the supine position? Is not the closing of the superior glottis, under all circumstances, a muscular act—both the carrying down and back of the tongue and epiglottis, and the lifting upwards and forwards of the larynx? The mouth, however, should be cleared of frothy mucus. 4. That to obviate the evident risk of entrance of air into the veins, the wound should be closed as soon as regurgitation is about to cease, and artificial respiration be then commenced; the jugular venesection having been performed as early as possible.—[*Edinburg Med. Journal.*]

*Observations on the Cause of the Disease known as Sun Stroke.* By  
SANFORD B. HUNT, M. D.

As the season is now approaching in which we may not unreasonably expect to witness occasional cases of this sudden and terrible malady, it may be useful to recur to it now as a subject, in itself interesting, and especially so to those who have made its causation and pathology a subject of study.

The name "sun-stroke," or *coup-de-soliel*, implies that it is produced by the direct rays of the sun, and its pathology has been almost universally conceded to be a sudden and intense congestion of the brain sufficiently severe to cause immediate death. Based on this view of the pathology, the treatment has consisted almost entirely of heroic blood-letting, and the application of cold to the head.

Unfortunately no one of these propositions or theories is proven, and perhaps it is not too much to state that no one of them is correct. It is the object of this article to consider briefly the questions involved in them, and taking them one by one, to bring to bear upon them such light as is afforded by the copious statistical tables which emanate from the health-offices of our principal cities. In conclusion, I shall endeavor to reconcile the facts of the disease so far as known, and suggest another theory of causa-

tion—one which I have already incidentally advanced on two or three occasions, but in which I have no especial claim to originality.

The first question for consideration is,

*Are the direct rays of the sun necessary to the production of the disease known as sun-stroke?*

Undoubtedly the larger number of cases occur in the open air, and in unshaded locations. But a very large number, so great as not to be considered exceptional, occur within doors or on cloudy days.

During the great epidemic of sun-stroke in New York, in August, 1854, of 235 deaths in that city from this cause, 49 were females. The argument here would be that as females do not live much out of doors, that some, at least, of these occurred under shelter. This supposition is confirmed by the fact that Dr. H. D. Swift, in his valuable paper on "Exhaustion from the Effects of Heat"—a monograph remarkable for the intelligence of its pathological views—mentions that "Eleven patients were attacked one morning in the laundry of one of our principal hotels; several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility; and we had an opportunity of comparing their symptoms and lesions with those who became exhausted after laboring in the sun, but was unable to satisfy ourselves of any distinction."

Again, Dr. Reyburn, of St. Louis, in his "Report on the Diseases of Missouri and Iowa," made to the American Medical Association at its meeting for 1855, furnishes the following statement:

"The cases of the disease that occurred in the last summer were not all traceable to direct insolation; the furnace-tenders in engine rooms, and bakers unexposed to the sun, were sometimes attacked. One case is reported to us of a female who had not been out of the house during the entire of a very hot day, being attacked."

It is evident, then, that insolation is not essential to the creation of this disease, but that it may occur in shaded localities, and even on cloudy days, for Dr. Reyburn's statistics show that four deaths by "sun-stroke" occurred in St. Louis on the 5th of July; and on reference to Dr. Engleman's meteorological tables, I find that this day there was a very cloudy sky, with rain and thunder. Moreover this was not a very warm day, the mean temperature being only 79°. I shall have occasion to refer to this day again, with reference to another meteorological condition.

SECONDLY.—*Is congestion of the brain the special pathological condition present in this disease?*

It is only recently that the fact has been fully recognized, that in the great majority of instances of sun-stroke, the symptoms have been those of syncope or exhaustion. Dr. Swift, in the paper before alluded to, proves from both symptoms and *post-mortem*



appearances that the latter is generally the true condition. Indeed, he says distinctly, that he has seen "a few, a very few cases, of insolation verified by a *post-mortem* examination,—certainly not one during the past year, although examinations were made in *all the cases* in which we suspected any cerebral lesion." And he gives one case where a hot head, suffused and injected eyes, contracted pupils, swollen countenance, coma and stertorous respiration, with "fair strength" of pulse, all seemed to indicate intense cerebral congestion; but after death none was found.

So far as we know, the question of congestion of the brain rests rather upon the symptoms than the pathological evidence. In a case which we witnessed a few years since, all the symptoms of intense congestion were present. We bled the patient freely from both arms. Soon after the flow of blood commenced he passed into the most violent convulsions, which were only discontinued on the production of profound syncope. Yet the symptoms next day did not indicate that congestion had been present. His recovery was rapid, and we have always felt some doubt as to whether congestion were really present in that apparently well-marked case.

At any rate enough is known to prove that contracted pupils and convulsions are not to be accepted as sufficient proof of congestion, and we must wait for actual *post-mortem* evidence of it to verify its existence. It is already plain that only a very limited number of cases are congestive, and it is quite probable that that limited number will be much decreased on careful study.

Dr. Swift has more correctly given the name of "Nervous Exhaustion from the Effects of Heat" to the disease. The nervous exhaustion is proven, and it is also proven that the brain is rather anæmic than congested. But the cause assigned by Dr. Swift is not satisfactory to me, and I expect to prove that heat is not alone sufficient to act as a cause.

*What are the facts in relation to heat as a cause of coup-de-soliel?*

During the period of greatest mortality from sun-stroke in 1853, in New York, the temperature was, according to the register kept at the New York Hospital, not very high. During August, as we have already mentioned, 235 deaths occurred from this cause. It will be interesting to examine the weather record of this period. We find from it that the temperature at 3, P. M., the hottest hour in the day, was above 90° on three days only; on which it stood respectively at 92°, 91° and 90°. There were two days only on which it stood between 85° and 90°. There were five days on which it stood between 80° and 85°, leaving twenty-one days in this month of "excessive heat," on which the temperature ranged lower than 80°. With reference to insolation we may also note that twelve days were cloudy, and that it rained on eleven of them, the total amount of rain falling being large, viz: 6.04 inches.

Turning to St. Louis we find that in the summer of 1854,

during a period of nine days, (the last four of June and first five of July) fifty-three deaths occurred from sun-stroke. The mean daily temperature of this period was  $86^{\circ}$ . Subsequently in July, another period of nine days occurred, the mean temperature of which was  $88^{\circ}$ , during which only seventeen deaths occurred. If temperature is the cause, why this disparity? Again four deaths occurred on the 5th of July, with a very cloudy sky, with rain and thunder, and a mean temperature of only  $79^{\circ}$ .

Here we leave the question of temperature. The facts adduced are conclusive that, though a certain temperature is necessary, neither the frequency or the fatality of the disease increase with a further rise of the thermometer. Heat then is not the essential cause; neither are the direct rays of the sun necessary.

What, then, is the essential condition for the production of *coup-de-soliel*, or rather exhaustion from the effects of heat?

I have been led to believe, from a careful survey of the premises, that a high humidity is the essential condition. This opinion is based upon weather records and upon analogy.

In the first place the condition of nervous exhaustion is never produced by a high, yet dry heat. The various experiments going to prove that a person may live and breathe without evil effects in a temperature high enough to cook a steak, or an egg, are too well known to need comment. Experimenters have borne for half an hour a temperature of  $135^{\circ}$ , without great discomfort.

No person, however, could live that time in a vapor-bath of that heat. The effect of surplus moisture in prostrating the nervous system, impairing the vigor of the heart's action and producing syncope, is as well known as the vapor-bath, and needs no comment. The symptoms of *coup-de-soliel*, in its ordinary form, are precisely similar to prolonged syncope. The exhausting influence of a sultry day, or of a hot sun directly after a shower, are familiar instances of the effect of high humidity upon the system. But the proposition remains to be proven by hygrometrical observation, and not by the uncertain perceptions of the senses. I purposely omitted to mention the hygrometrical condition of New York and St. Louis in the epidemics cited, because it was desired that the relation of *heat* in their causation should be tested by itself.

We may now, however return to it.

Mr. Blodget (then of the Smithsonian Institution) said of it (New York Journal of Medicine, Oct., 1853,) that "the temperature of evaporation at New York, at the time of greatest mortality in August, was from  $80^{\circ}$  to  $84^{\circ}$ , being higher than the maximum temperature of evaporation at New Orleans at any time in 1852, by  $2^{\circ}$ . Commenting on this point on another occasion, we made the following remarks:

"This implies, necessarily, a high fraction of saturation, and placing all the evidence together—the fact that the temperature

at 2 P. M., was only  $90^{\circ}$  to  $92^{\circ}$  (not an unusual heat for the season,) that the cases were mostly among foreigners, that Dr. Swift describes the symptoms as indicative of 'nervous debility,' and not of 'cerebral congestion,' that the dew-point reached a tropical maximum, and the conclusion is irresistible that, not dry heat, but a long-continued bath of aqueous vapor was the true cause of this unparalleled mortality. But, as if to make the evidence irrefragable, we are told that 'eleven patients were attacked one morning in the laundry of one of our principal hotels;' and 'several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility.' I regard these last mentioned facts as of the last importance. Here, in a laundry, or in a sugar-refinery, unaffected by solar rays, filled with vapor artificially produced, having an excessive humidity, unventilated (for on these fatal days there was no wind,) men fell by dozens in sudden death. The experience of all time contradicts the idea that dry heat can produce these effects, and I regard them as conclusive upon the question, whether or no the combination of high heat and humidity is of itself a cause of disease."

Turning again to St. Louis, we ascertain from Dr. Engleman's tables, that during the period of nine days before alluded to, the mean temperature of evaporation was  $78^{\circ}$ , against a dry bulb temperature of  $86^{\circ}$ . The fraction of saturation is high enough to prove the presence of an immense amount of aqueous vapor, nearly as much, in fact, as could be forced into the air without having it in the form of steam.

Without multiplying statistics, I may state that the examinations of such weather records, corresponding with periods of mortality from sun-stroke, as have fallen under my notice, has uniformly resulted in fixing a high temperature of evaporation as the efficient condition of the cause of the disease, and that without definite relations to the dry bulb temperature.

A question of much interest connected with this theory of causation, is as to what power a humid atmosphere exerts on the absorption of the solar rays. I made last summer, some experiments, with a view to ascertain this point. So far as they went they seemed to prove that the difference between a thermometer in the sun and one in the shade, is greater on days of least humidity. The observations were, however, made without sufficient precaution against reflected heat, and will be repeated during the present summer with care. The method of making them is to use four thermometers: 1st, one with a dry bulb: 2d, one with a wet bulb—these two to be in the open air, shaded. A third thermometer should be exposed with a naked bulb to the sun's rays, while a fourth should be similarly exposed and wrapped around with black wool. Only clear days should be noted. In this way we hope to establish some relation between humidity and



radiation, corresponding with that which is evident to the senses in the chill produced on going into the shade on a humid day.

*Buffalo Medical Journal.*

*Carbonic Acid as a means of artificially producing Premature Labor.*

By M. SCANZONI, Professor to the Faculty of Würzburg.

Two years since M. Scanzoni proposed to provoke premature labor artificially by exciting the breasts by means of cupping glasses, and by reflex action to produce contractions of the muscular fibres of the uterus. This process, made use of on several occasions, often promptly induced labor, at other times it succeeded better as an adjuvant, while in many cases its effect was incomplete, or failed almost entirely. The application of the glasses frequently produced excoriation of the mamellæ, inflammation, abscesses, and more or less severe pain. Generally, the result of the mammary excitation was particularly evident, when the irritation of the nerves of the mamellæ was accompanied with local excitation of the womb, and when besides the cups, the uterine douche, the colpeurynta of Brown, the tampon, &c., were used. Desirous of finding a certain means of provoking uterine contractions without inconvenience to the mother, and without danger to the infant, and persuaded that artificial premature labor is one of the most useful and valuable resources of obstetrics, the professor of Würzburg continued his researches, and in the interesting practice which the maternity of Würzburg furnished, occasion soon offered upon which to experiment. Taking the observation of M. Brown-Séguard as a starting point, which shows that carbonic acid provokes the contractions of the muscles of organic life; that the genital organs for a long time exposed to the action of this acid become the seat of very severe congestion; and that it is even a sure means of curing amenorrhœa, M. Scanzoni resolved to employ this acid to arouse the contractile power of the uterus, and to excite it so as to bring about labor.

The apparatus employed was as follows:—A flask holding about a quart, hermetically sealed, with a stopper having two openings, by one of which a tube penetrated to the bottom of the flask, to the other orifice was fitted a horn pipe which connected with a caoutchouc tube about a foot long, ending in a canula of an ordinary injecting syringe. Bicarbonate of soda, and then some acetic acid is introduced by the first tube, a conical glass speculum is placed in the vagina. The caoutchouc tube inserted in a cork is introduced into the speculum, which it exactly fits. The carbonic acid is increased or diminished at will by the addition or not of acetic acid.

The following is the report of the case in which it was first employed:—

D. S.—, 26 years old, primipara, menstruated for the last time May 26, 1855; entered the Maternité of Würzburg Jan. 29, 1856. Pelvis low and narrow. The antero-posterior diameter, ordinarily from 4 to 4½ inches, is only 3¼ to 3½ inches. The vaginal portion of the neck is from five to six lines in length, and the external orifice firmly closed. The head of the foetus was felt above the anterior portion of the vaginal arch, the beatings of the heart were heard to the left, and the extremities of the foetus were felt to the right and high up, near to the bottom of the womb. The mother thought she was in the thirty-second or thirty-fourth week of gestation, and the examination of the genital organs confirmed this opinion. The narrowness of the pelvis preventing natural labor from taking place, and furnishing the indication for the induction of premature labor, M. Scanzoni resolved to try carbonic acid.

Feb. 2. At eight o'clock in the evening, the apparatus was applied for twenty minutes for the first time, without provoking any notable modifications.

Feb. 3. At eight A. M., application for twenty minutes, and at eight P. M. for half an hour. The mother felt while the gas penetrated into the vagina a disagreeable sensation of painful prickings, and during the day darting pains about the umbilicus. Evening—The vaginal portion of the neck was slightly softened. After a good and tranquil night the pains about the umbilicus recurred.

Feb. 4. The apparatus was used half an hour morning and night. The same pricking sensations during the application. The neck became dilated during the day so as to permit the finger to feel the inferior segment of the membranes. During the night, severe and darting pains in the groins and back; towards evening the hand placed upon the abdomen followed the evident contractions of the uterus, which, to tell the truth, soon after ceased.

Feb. 5. In the morning another application for half an hour, followed by the ordinary pricking sensations. The orifice was of the size of a two franc piece, yielded easily, and was readily dilated by the finger. The vaginal secretion is very much increased. In the afternoon the painful contractions of the uterus appeared, which increased in intensity by degrees. At half-past six in the evening the membrane broke, and an hour after a living child was expelled, which weighed 1350 grammes. During delivery a slight hemorrhage appeared, which necessitated the removal of the placenta a quarter of an hour after the birth of the child. The sequelæ of labor were not at all troublesome.

*Reflections.*—With the exception of the vaginal prickings, which seemed to continue only during the application of the current of gas, the employment of carbonic acid is followed by no serious inconveniences, and acts with sufficient energy, since its application during 3½ hours was sufficient to provoke the expulsion of the foetus. Unfortunately there is but one case, and it may be that this process may have some unpleasant results in nervous

women, and cause uterine spasms rather than normal contractions. The vagina may become irritated, and it is not clearly proved that the increased vaginal secretion was not caused by a commencement of vaginitis. To decide upon the value of this method, the author himself calls for further experiments, and it is desirable that the demand of the distinguished physician of Würzburg should meet with some replies.—[*Weiner Medicinische Wochenschrift*, from *Amer. Med. Monthly*.]

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*Is it always necessary to resort to Amputation when a Limb is attacked with Sphacelus?*

Prof. Bardinet, of Limoges, has brought this important question before the Academy of Medicine of la Haute Vienne, and has answered it in the negative.

We are too ardent partisans of conservative surgery, having ourselves sufficiently often protested against the excessive tendency to operate everywhere and at all times, not to hasten to submit to our readers the reasons adduced by M. Bardinet in support of his opinion.

The following is the *résumé* of his memoir:

1st. In this memoir I report eight new cases of sphacelus (two of the finger, three of the forearm, and three of the leg,) in none of which amputation was performed. The task of eliminating the dead parts was intrusted to nature, except that her operations have been actively aided by the employment of the ordinary disinfectants, and especially by the early resection of the dead parts near the eliminatory circle.

In these eight cases recovery took place.

Had amputation been performed, it is, on the one hand, extremely probable that a certain number of patients would have died; on the other, several of them would have been deprived, in consequence of the necessity of amputating above the eliminatory circle, of a portion of their limbs (the knee, for example, or the upper part of the forearm,) which they are fortunate in having been able to preserve.

It is, therefore, not always necessary to amputate in cases of sphacelus.

2d. We should, above all, be extremely cautious in having recourse to amputation in cases of spontaneous gangrene—first, because in such cases, whatever we do, and even after the establishment of the eliminatory circle, we can never be sure that the gangrene will not reappear, and that we shall not thus needlessly add the pain and dangers of a serious operation to those of the original disease.

3d. Because the fear of amputating in parts whose vessels are diseased, obliges us to carry the section up to a considerable



height, and thus involves, sometimes very uselessly, the sacrifices of parts which might have been preserved, and the loss of which is to be lamented.

4th. Because the gangrene may attack several limbs in succession, and even all the limbs, of which I have quoted two examples, and we should then find ourselves compelled to perform a series of sad mutilations.

5th. Because, on the contrary, in confining ourselves to cutting away the dead parts near the circle of elimination, we perform an operation which is always practicable and always useful, as it liberates the patient from a focus of infection.

6th. Because we avoid the risk of performing an amputation, all the benefits of which will be lost if the gangrene makes fresh advances.

7th. Because, in adopting the new mode, we do not unnecessarily remove parts which the patient is much interested in preserving.

8th. Because we have still the power of performing amputation, if it should become necessary.—[*Dublin Medical Press* from *Presse Médicale Belge*.

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*On Liquidambar Styraciflua*. By CHARLES W. WRIGHT, M. D.,  
Professor of Chemistry in the Kentucky School of Medicine.

*Liquidambar Styraciflua*, commonly called *sweet-gum*, is indigenous to nearly every part of the United States, and constitutes one of our largest forest trees. When an incision is made through the bark of this tree, a resinous juice exudes, which possesses an agreeable balsamic odour. When this substance first exudes, it is of the consistence of turpentine, and possesses a stronger smell in that condition than it does after it has become resinified. Contrary to the statements made by Wood and Bache, in their *Dispensatory*, this tree furnishes a considerable quantity of resin in the Middle States, particularly in the States of Ohio, Indiana, and Kentucky, bordering on the Ohio River. It is annually collected in those States, and sold under the name of *gum-wax*. It is a much more agreeable masticatory than the spruce-gum, and is chewed in the West by nearly all classes. By proper incisions, one tree will yield annually about three pounds of the resin.

The chemical composition of the specimens collected in this latitude correspond with that given by M. Bonastre, of specimens gathered elsewhere, viz : benzoic acid, a volatile oil, a semiconcrete substance separated by distillation and ether, an oleo resin, a principle insoluble in water and cold alcohol, termed *styracine*. The bark of the tree contains tannic and gallic acids, to which its astringency is due.

What I wish more particularly to call attention to is the employment of a syrup of the bark, of this tree, in diarrhœa and dysentery,

and more especially the diarrhoea which is so prevalent among children during the summer months in the Middle States, and which frequently terminates in cholera infantum.

The best formula for the preparation of this syrup is that given in the *United States Pharmacopæia*, for the preparation of the syrup of wild-cherry bark, of which the following is a copy, the sweet-gum bark being substituted for the wild-cherry bark.

“Take of sweet-gum bark, in coarse powder, *five ounces*; sugar (refined) *two pounds*; water a *sufficient quantity*. Moisten the bark thoroughly with water, let it stand for twenty-four hours in a close vessel, then transfer it to a percolator, and pour water upon it gradually until a pint of filtered liquor is obtained. To this add the sugar in a bottle, and agitate occasionally until it is dissolved.”

The dose of this syrup for an adult is about one fluidounce, to be given at every operation, as long as the operations continue to recur too frequently.

One advantage which this medicine possesses over most astringent preparations is that of having an exceeding pleasant taste, and of being retained by an irritable stomach when almost every other substance is rejected. Children never object to it on the score of bad taste. The resinous and volatile bodies which it contains, no doubt enhances its value. My brother, Dr. J. F. Wright, of Columbus, Indiana, has employed this preparation for the last three years in a great number of cases, with the most satisfactory results. He prefers it to any other article where there is an indication for astringent medication in the class of diseases before referred to. In the bowel complaints of children it has a decided advantage over all preparations containing opium, and I am always pleased with the happy results which follow its employment in that class of patients.—[*Amer. Jour. of Med. Sciences*.]

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*Quinated Cod-Liver Oil.* By M. DONOVAN.

A preparation of cod-liver oil, called *oleum aselli cum quina*, has been lately introduced into medical practice, and is favorably noticed by some practitioners. It is probable that the tonic effects of quinine, conjoined with the restorative powers of the oil, may afford a combination of greater efficacy than is possessed by either separately. To many persons, the mawkish taste of the oil modified into the decided bitter of the quinine is an improvement. I have been informed that the combination of sulphate of quinine with cod-liver oil is effected by exposing them in a state of mixture to a certain temperature: if the heat be too high or too low, the combination, it is said, will either not take place or it will be subverted. I have made some trials with very unsatisfactory results, the quantity of sulphate which dissolved being very small, as might be expected from the character of sulphates in general.

Aware that the alkaline basis of sulphate of quinine possesses

some of the properties of a resin, it seemed probable that it might dissolve in oil; and, on making the experiment, I found that this is actually the case.

The alkaloid quinine is known to possess little efficacy as a medicine on account of its insolubility in aqueous liquids; hence, it is always administered in the state of acidulated disulphate, or, in other words, in the state of sulphate. Oil, by rendering quinine soluble, develops the medicinal virtues of that alkaloid, and thus, for every useful purpose, acts the part of sulphuric acid.

A few trials convinced me that quinine may be dissolved in cold cod-liver oil in even greater ratio than it is ever necessary for the purposes of the physician. A solution of eight grains to the ounce is intensely and persistently bitter. When the mixture is first made, a very disagreeable and peculiar smell is developed; but by exposure to the air for an hour or two, or better by filtering, the smell exhales and is dissipated. The colour of the oil is deepened by the combination.

This compound, which may be briefly named *oleum aselli quina-tum*, has this advantage, that two active medicines, of coinciding effects, may thus be administered at one dose. To some, it is a severe trial to swallow either of them; and to such persons it would be a relief, instead of taking two separate disagreeable doses at different times, to swallow both at once, and have done with them.

There are constitutions which will not tolerate the free exhibition of cod-liver oil, and patients of this class are precluded from availing themselves of advantages which might have been of the utmost value to them. Perhaps the quinated oil would agree better with such stomachs.—[*Dublin Med. Press.*

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### *New Method of Treating Phagedæna.*

Mr. Cock has recently been trying, in Guy's Hospital, a plan of treating phagedænic ulcers by constant irrigation. The method is, to have the sore well exposed, and the affected limb placed on some water-proof material; a reservoir above the bed is then filled with lukewarm water, and, by means of an elastic tube, a stream is kept continually flowing over the surface of the sore. By this means all particles of discharge, etc., are washed away as soon as formed, and the ulcer assumes the clean, pale appearance of a piece of meat which has been long soaked. In all the cases in which it has been practicable to employ the irrigation efficiently, a speedy arrest of morbid action has been secured, and the number has included several in which the disease was extensive and severe. The theory of the treatment is, that phagedænic action is a process of local contagion—the *materies morbi* by which the ulcer spreads being its own pus. Admitting this supposition—which there is every reason for doing—to be true, the object to be kept in view in curative measures is either to decompose or to re-



move the local virus. This end is accomplished somewhat clumsily by such remedies as the nitric acid, which, unless so freely used as not only to char up all the fluid matters, but to destroy the whole surface of the ulcer to some depth, fails to prevent a recurrence. Mr. Cock's plan of subjecting the ulcer to a perpetual washing attempts the accomplishment of the same end by a more simple and direct method. It involves no pain to the patient, and does not destroy any healthy tissues. Its one advantage seems to be, that, excepting on the extremities, its use would be attended with some inconvenience, from the difficulty of preventing the water from running into the patient's bed. Should, however, further trials confirm the very favorable opinion which has been formed at Guy's as to its value, these difficulties might, no doubt, be surmounted by the contrivance of suitable apparatus. The directions as to temperature of the water are that it should be as warm as comfortable to the feelings of the patient: and, as preventive of smell, Mr. Cock advises the addition of a small quantity of the chloride of lime or of soda.—[*Med. Times and Gaz.*

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*Chloroform in Cynanche Trachealis.* By J. JEFFERY, M. D., of Southfield.

As much has been written on the disease called Cynanche Trachealis, or Croup, and a variety of favorite remedies presented to the medical profession, which have excited the most ardent hopes for a short time, that something reliable had been discovered, which would not only inspire confidence in the physician, but remove the anguish of the sufferer, and dispel the terror and dismay that weighs down many an anxious parent: which hopes have mostly perished in embryo, it is with some diffidence that I present any thing on the subject fearing it may not sustain the confidence it has excited in my mind. I wish to report a recent case that came under my care, the treatment of which was entirely new to me, (but perhaps, not to others,) and so perfectly agreeable to the patient and satisfactory to myself, that the merits of the remedy may be duly tested by the medical profession. The patient, a lad between four and five years of age, had what the parents called whooping-cough, (but from their account rather a peculiar type or form, as also many cases that I have witnessed during the past winter,) while they lived in Redford. The family came here about the first of April, two of the children exhibiting some symptoms of the remaining disease. On the evening of the 23d ult., the patient came in from play, with a severe cough which alarmed the parents. I was absent from here. They got at my office a composition, prepared with Lobelia Sem., Ant. Tart., Lard and Licorice, administered it through the night with no benefit. On the A. M. of the 24th, I saw him and found him

with all the symptoms of severe croup, could only speak in a partial whisper; nervous system very irritable. Skin dry, considerable thirst, no cough of importance. The patient suppressing the effort to cough as much as possible. The shrill whistling sound of breathing could be heard for two or three rods from the house. Bowels had not moved for twenty-four hours; tongue with brownish coating. Gave him about 15 or 20 grs. of Hyd. Sub. Mur., followed with a teaspoonful of Sal Epsom. In the evening, bowels moved freely, and he appeared some better for a short time. Advised inhalation of vinegar and water, with the ordinary remedies. 25th, at 3 o'clock, A. M., was called to see the patient, as they thought he was dying. Found him unconscious, with the eyes half open and turned upwards, head thrown back, respiration feeble and exceedingly difficult, trachea apparently nearly closed up, pulse scarcely perceptible at the wrist, heart violently agitated, as if making its last struggle, extremities cold, &c. Under these discouraging circumstances, I concluded to try the effect of chloroform, in order to palliate the distressing symptoms and ease the patient through the portal of death. I put it on a handkerchief and placed myself by his side, allowing access to the air, holding it under the chin. In about ten minutes, the breathing was much relieved, the pulse became moderate and of fair strength at the wrist. The heart quite calm. I continued this about two hours, regulating the strength of the chloroform to the urgency of the symptoms. The patient seemed to fall into an easy slumber, the eyes closed; still the breathing was not natural, but so much improved that I began to feel some hopes of recovery. I left the chloroform in the care of the nurse, with instructions to use it sufficient to keep the patient quiet. Saw him again in the afternoon, found him with skin moist, and very much improved in strength, and all the urgent symptoms relieved, but coughing and raising his mouth full of tough phlegm, quite often, having the appearance of a pseudo-membranous substance, which continued for about twenty-four hours. The patient walking about the room part of the time. At the end of about thirty-six hours from the time of the commencement of the chloroform, he was able to eat nearly a full meal, and play around the house; a slight wheezing continued for about three days, since which he has been well. All the medicine I gave after the evening of the 25th, was a solution of Muriate Ammonia, half 3 to half pint of water and molasses, dose one to two teaspoonsful every two or three hours.

If you deem this of any importance, you can publish such part of it as you choose in your worthy journal, or dispose of it as you see fit. My only object is to aid the profession in their endeavors to benefit suffering humanity, and secure the confidence of community in medical science.—[*Peninsular Jour. of Med.*

*On Detection of Strychnia.* By MARSHALL HALL, M. D.

The detection of strychnia as a poison is, at this moment, of deep public interest.

When the chemical test fails, there remains, I think, another—the physiological. Having long studied the effects of strychnia on the animal economy, (I have sent two papers on this subject to the Institute of France,\*) I am persuaded that these effects on the most excitable of the animal species are at once the most delicate and specific tests of this poison.

I have just performed two experiments, and only two, for want of materials for more.

I requested Mr. Lloyd Bullock, of Hanover street, to dissolve one part of the acetate of strychnia in one thousand parts of distilled water, adding a drop or two of acetic acid.

I then took a frog, and having added to one ounce of water 1-100th part of a grain of the acetate of strychnia, placed the frog in this dilute solution. No effect having been produced, 1-100th of a grain of the acetate was carefully added. This having produced no effect, in another hour 1-100th of a grain of the acetate was again added, making the 3-100th, or about the thirty-third part of a grain. In a few minutes, the frog became violently tetanic, and though taken out and washed, died in the course of the night.

I thus detected, in the most indubitable manner, one thirty-third part of a grain of the acetate of strychnia. It appeared to me that, had more time been given to the experiment, a much minuter quantity would be detectable.

I placed the second frog† in one ounce of distilled water, to which I had added the 1-200th part of a grain of the acetate of strychnia. At the end of the first, the second and the third hours, other similar additions were made, no symptoms of strychnism having appeared. At the end of the fifth hour, the frog having been exposed to the action of 1-50th part of a grain of the acetate of strychnia, tetanus came on, and under the same circumstances of removal and washing, as in the former experiment proved fatal in its turn.

I thus detected 1-50th part of a grain of the poisonous salt by phenomena too vivid to admit of a moment's doubt; the animal, on the slightest touch, became seized with the most rigid general spasmodic, or, rather, tetanoid rigidity. And this phenomenon, alternating with perfect relaxation, was repeated again and again.

As the nerve and muscles of the frog's leg, properly prepared, have been very aptly designated as galvanoscopic, so the whole frog, properly employed, becomes strychnoscopic.

\* See the *Comptes Rendus* for June 1847, and February 1853.

† These frogs were not fresh from the pools.



In cases of suspected poison from strychnia, the contents of the stomach and intestines, and the contents of the heart, blood-vessels, &c., must be severally and carefully evaporated, and made to act on lively frogs just taken from the ponds or mud. I need scarcely say that, taken in winter, the frog will prove more strychnoscopic than in summer, in the early morning than in the evening.

The best mode of performing the experiment also remains to be discovered, with all its details and precautions, an inquiry into which I propose to enter shortly. Meantime, this note may not be without its utility.

P. S.—I have repeated my experiment. I placed one frog, fresh from the pools, in an ounce of water, containing the 1-50th part of a grain of the acetate of strychnia; a second in the same quantity of water containing the 1-66th, a third containing 1-100th, and a fourth containing 1-200th. All became tetanic in two or three hours, except the third which was a female, (the other being males,) which required a longer time.

The 1-200th part of a grain of the acetate of strychnia is, therefore, detectable by means of this test conferred by physiology.

We now placed a male frog in 1-400th part of a grain of the acetate of strychnia, dissolved in six drachms of water. In three hours and a half it became violently tetanic.

The fresh frog is, therefore, at this season, strychnoscopic of 1-400th part of a grain of the acetate of strychnia, and probably to a much minuter quantity, which ulterior experiment must show.

In two other experiments the 1-500th and the 1-1000th of a grain of the acetate of strychnia were detected.—[*Lancet*.

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*New Form of Astringent Application.* By Dr. WILLIAM BAYES, Brighton.

Pure glycerine dissolves nearly its own weight of tannin, affording a very powerful local astringent application.

The solution of tannin in pure glycerine appears to me to supply a desideratum long felt, and capable of a great variety of useful applications.

The solvent property of glycerine over tannin, allows us to form a lotion of any desirable strength, as the solution is readily miscible with water.

The solution of tannin in glycerine, in one or other of its strengths, is peculiarly applicable to many disorders of the mucus membrane, readily combining with mucus, and forming a non-evaporizable coating over dry membranes; hence it may with benefit be applied to the mucus membranes of the eye and ear in many of its diseased conditions. It forms a most convenient application to the vaginal, uterine, urethral, or rectal membranes, where a strong and non-irritant astringent lotion is desired.

In local hæmorrhages, where the bleeding surface can easily be reached, it will prove very convenient, and may be applied either with a sponge or small brush.

The solution must be kept in the dark, and should not be prepared for any great length of time before used, or decomposition will occur.

It is singular that glycerine does not possess the same property towards gallic acid.—[*Association Med. Jour.*

### *Radical Cure of Hydrocele.*

A man, aged 31, has recently been under Mr. Lloyd's care, in St. Bartholomew's, on account of a hydrocele, which had been several times tapped, and on one occasion treated by the injection of iodine, with the hope of permanent cure. The latter expedient, however, had failed, the sac having re-filled. Mr. Lloyd adopted a plan which has long been a favorite with him, of introducing a little of the red precipitate into the sac. The fluid having been drawn off by a canula, large enough to allow a director to enter it, the latter instrument, oiled, and then dipped in the powder so as to carry a few grains adhering to it, was introduced and moved about in the cavity. The introduction was repeated two or three times; some inflammation followed, and a perfect cure ensued. The practice has the advantage over that by injection of not requiring any special apparatus. Mr. Lloyd believes it also to be more uniformly successful.—[*Med. Times and Gazette.*

### *Observations and Remarks on Diseases of the Brain.* By H. BAMBERGER. *Verhandlungender Physicalisch-Medicinischen Gesellschaft in Würzburg.*

Although we are not informed with regard to the number of the cases upon which Dr. Bamberger's remarks are founded, it is manifest that his experience is extensive, and his opinions therefore carry considerable weight. The cases which he does record are of much interest, and embrace almost the whole field of cerebral pathology. The following are the prominent points of his investigations to which we would draw the reader's attention.

*Apoplexia Nervosa.*—Pathological anatomy has so much narrowed the limits within which it is possible to apply the term nervous apoplexy, that we now rarely meet with cases to which it may be fairly given—viz., those in which sudden death occurs with cerebral symptoms, and in which no palpable lesion is discoverable after death. It is probable that the microscope and pathological chemistry may reveal minute changes that have hitherto escaped detection, and that the term, in its present sense, may have to be entirely eliminated from nosology. Dr. Bamberger is of opinion that sudden death resulting from violent emotions, electricity, and

concussion, must be classed in this category. He quotes one case that fell under his observation. A girl, aged twenty, previously in perfect health, was admitted into the Prague Hospital in January, 1850, having the evening before been seized with vomiting, followed by universal convulsions and unconsciousness, brought on by the information received in the morning of the same day that her lover had proved faithless. The temperature of the surface was elevated, the pupils unaltered, the eyes closed, the face pale, respiration stertorous, and the pulse intermittent. There was occasional spasm of the extensors of the upper and lower extremities, and also of the abdominal muscles. The extremities, when raised and allowed to fall, descended as if lifeless, though not actually paralytic. There was no return of consciousness, and she died twenty-eight hours after the seizure.

*Necropsy.* The brain was pale and anæmic, the walls of the left ventricle of the heart were slightly hypertrophied, the aorta very narrow and its coats thin, the heart and large vessels were full of loose coagula. All other organs were perfectly healthy. There was no suspicion nor any evidence of poisoning.

*Apoplexia Serosa.*—We are still on debatable ground; for although the occurrence of sudden death, with symptoms of apoplexy, and exhibiting serous effusion into the ventricles, the substance of the brain, or the meninges, is undoubted, the majority of observers (as Abercrombie, Dietl, Wunderlich, Leubuscher) are of opinion that these cases are rarely, if ever, idiopathic. Dr. Bamberger has frequently met with the varieties of acute serous effusion alluded to, but is of opinion that they are always the secondary result either of cerebral diseases and abnormal state of the cerebral circulation, or of an altered state of the blood induced by some other acute or chronic disease, as granular kidney, typhus, acute exanthemata, tubercular, cardiac, and other maladies.

*Meningitis.*—Dr. Bamberger adverts briefly to a few points connected with this subject, one of which is the occurrence of inflammation limited to the ventricular lining membrane; he is of opinion that where the post-mortem appearances indicate such a condition, a previous inflammatory exudation on the surface has been reabsorbed, or overlooked as an unessential concomitant.

*Cerebral Hæmorrhage.*—The author refers all cases of hæmorrhage to increased pressure in the vascular system, or to an altered condition of the blood, but from the alterations previously induced in the coats of the vessels. He admits that the latter lesion has not yet been demonstrated. As but few authentic cases of passive hæmorrhage within the cranium are on record, he relates some that have fallen under his own observation in typhus (typhus petechialis,) scurvy, and chlorosis. The rarity of the occurrence in typhus is shown by the fact that Dr. Bamberger has only met with it once in above a thousand cases of the disease. In that case, after death, which had ensued on the thirteenth day of the typhus,



in a boy, aged fifteen, a cavity of the size of an egg, containing blood that was slightly coagulated, was found in the right corpus striatum. This was also the site of the apoplectic spot found in a girl, aged twenty-five, who died suddenly while under treatment for intense chlorosis. In scurvy, which the author has repeatedly found almost epidemic, he has also met with apoplexy in a girl, aged twenty-three, in whom numerous small apoplectic spots were found closely aggregated in the right anterior cerebral lobe, besides another large extravasation on the convexity of the left posterior lobe.

We must pass over the author's observations on the uniform occurrence of the crucial paralysis shown with reference to the facial, fifth, oculomotor, optic, and acoustic nerves; on the rapid return of sensibility, compared with that of motility, in the paralysed half of the body; on hæmorrhage into the pons, the sac of the arachnoid, into the tissue of the pia mater, and the grey matter of the brain.

Red softening occurs in three forms; it may be latent and accompanied with such trifling symptoms as not to induce a suspicion of a cerebral affection; it may be accompanied by symptoms of apoplexy; or it may manifest a very chronic form, in which we meet with the most varied symptoms of cerebral irritation and compression. It is only in the last variety that a diagnosis is possible, though even here there are numerous sources of error. A very peculiar case is detailed, in which the author assumes the conversion of the ordinary products of normal inflammation into tubercle—a view which is certainly at variance with the prevailing opinions on tubercle and the tubercular diathesis. The case is briefly this. A female, aged thirty-five, was seized in the fifth month of her seventh pregnancy with pneumonia, which lasted three weeks; about three weeks later severe headache was followed by sudden rigidity of the left extremities, the fore-arm and leg being flexed; severe convulsive movements of the same extremities ensued lasting a few minutes. There was no unconsciousness, though she was slightly giddy during the attacks. The rigidity and the temporary spasms continued for a week, when she was admitted into the hospital (November, 1851.) She was able to answer questions, but her memory was somewhat impaired. There was occipital headache, paralysis of the left side of the face, violent contraction of the right trapezius, of the left arm and leg; attempts to overcome the flexion caused severe pain. Sensibility of the parts unimpaired, total loss of motility; some improvement took place in the paralytic condition, but in December an epileptic seizure supervened; delivery followed in the same month; further epileptic attacks ensued, with pleurisy in the right side, and advancing tubercular disease of the lungs. Death on the 27th January. The state of the brain was as follows:—On the inner and upper surface of the right hemisphere, a portion of the size of a desert plate exhibited

intimate adhesion between the membrane to the brain by means of a greyish-red cellular tissue, and a yellow cheesy friable mass; the subjacent gyri were converted into a similar substance to an extent of 9 to 10 lines, not circumscribed as cerebral tubercle generally is; the cerebral tissue in the immediate vicinity was reddened and softened, the more distant portions almost pulpy. Old and recent tubercles were found in the apices of both lungs; the liver and spleen also showed tubercular deposit. Dr. Bamberger argues that the symptoms showed that the cerebral disease commenced with inflammation, and that therefore the deposit in the brain was the result of a conversion of plastic exudation into tubercle; but it necessarily suggests itself that the tubercular deposit may have been long dominant in the brain, and that the inflammation was a secondary affection. Until such cases are multiplied, it appears illogical to adopt a theory which is opposed to the common experience of pathologists. Two interesting cases are given of encephalitis, resulting from plugging of the arteries by fibrine carried from other portions of the circulating apparatus.

With regard to cerebral abscesses, Dr. Bamberger only confirms the known fact of their remarkable latency. The details of three cases are introduced in evidence.

*Paralysis Agitans.*—In one necropsy of a female, aged forty-five who had been subject to constant tremors of both upper extremities and the head from her childhood, the meninges were found opaque, and infiltrated with serum of which two ounces were found in the ventricles; the brain was otherwise normal. The characteristic feature was found in the spinal cord, which was white and moist, and exhibited throughout the white matter numerous grey, gelatinous spots; from the middle of the cervical to the middle of the dorsal portion there was a central canal, admitting of the passage of a probe. Dr. Bamberger regards the gelatinous spots as the residue of previous inflammation, and the formation of the canal as the result of atrophy of the cord.

*Encephalic Tumours.*—The diagnosis of encephalic tumours still remains, to a great extent, a matter of guesswork, the symptoms being mainly those of compression, which they share equally with other affections. Of 17 cases observed by Dr. Bamberger, 11 occurred in men, 6 in females — ratio established by Lebert and Friderich. They were distributed over the different periods of life as follows:—Under ten years, 1; ten to twenty, 3; twenty to thirty, 4; thirty to forty, 4; forty to fifty, 2; fifty to sixty, 2; sixty to seventy, 1. Six were large tubercular or tuberculoid masses; 2, cancerous; 2, fibrous tumours; 2, simple cysts (not apoplectic); 1, echinococcus; 1, extended hard masses, of an undefined character; 2, osseous tumors in the cerebral tissue; and 1, cholesteatoma. In 10 cases the cerebrum, in 5 the cerebellum, and in 2, both were affected.

The most uniform symptom was cephalalgia: this was absent

only in two cases; it was severe and paroxysmal in 6. Paralytic affections occurred next in order of frequency—viz., 10 times; in 5 gradually, in 5 suddenly. Convulsive attacks were met with 8 times; 7 in the form of epilepsy (6 of these with cerebral, 1 with cerebellar, tumours;) 1 in the form of convulsive affections of one side of the face. Derangement of the intellectual functions occurred in 8 cases.

The details of 3 cases of encephalic tumours, for which, however, we cannot make room, conclude Dr. Bamberger's interesting communication.—[*Brit. and For. Med. Chir. Review.*

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*Obliteration of the Thoracic Aorta.* *Wochenblatt der Zeitschrift der k. k. Gesellschaft der Aerzte zu Wien.*

At a meeting of the Medical Society of Vienna, held on the 19th October, 1855, Professor Skoda introduced a man affected with obliteration of the thoracic aorta. In illustration of the lesion, the Professor exhibited preparations of a five-months' foetus and of a new born child, in which he indicated the point at which alone this anomaly can take place or has hitherto been observed. It is the point at which the ductus botalli communicates with the aorta and the short space intervening between this point and the origin of the left subclavian artery. During foetal life, this portion is commonly narrower than the remainder of the aorta, and only acquires the same calibre after birth.

The individual in question was a man, aged forty-seven; a jeweller; of normal complexion, and throughout well nourished. On the whole, he enjoys good health, and has only come under clinical observation owing to his having, for three years past, suffered from some dyspnoea in making violent exertion. This is due to an insufficiency of the tricuspid valve, which has only been established for three years.

The following are the grounds upon which Professor Skoda has diagnosed a co-existing obliteration of the aorta:—In addition to the blowing murmur coincident with the impulse, and which indicates the above-mentioned insufficiency, a "peculiar vibration or whirring (*schwirren*) is to be perceived over the greater part of the thorax, partly by palpation, partly, as in the course of the intercostal arteries, by auscultation; it follows the impulse, and for that reason has its seat in the arteries. The vibration of the arteries of the thorax is due to their dilatation, as may be shown by touching the superficial epigastric arteries, which are much dilated and very tortuous. The beat of the crural arteries at the groin is very feeble, and no pulsation can be felt in the abdominal aorta."

These are the indications characteristic of obliteration of the thoracic aorta; the collateral circulation is carried on by the branches of the subclavian arteries, which must therefore be dilated.



A large volume of blood passes from the anterior intercostals to the posterior intercostal, and by centripetal movement reaches the descending aorta, which is thus filled with blood sufficient to supply the arteries of the intestines, but not sufficient to produce distinct pulsations. The inferior extremities probably also receive a supply by the the anastomosis of the superior and inferior epigastric arteries. No cyanosis is observed, because nowhere venous blood is introduced into the arterial system.

In connection with this case, Professor Skoda made the following remarks:—1. That in examining the heart, we occasionally perceive murmurs which give rise to the assumption of valvular disease, while the heart is afterwards found healthy; and that the murmur was produced in the coronary arteries or in other arteries, in the vicinity of the heart. Such errors can only be avoided by carefully attending as in the case detailed, to the coincidence or non-coincidence of the murmur with the movements of the heart. 2. The circumstance that the nutrition of the individual was unimpaired, although the circulation in most of the organs must be, doubtless, slackened, proves that the deranged nutrition, so frequently coinciding with impediments in the circulation, does not depend solely upon the latter.

Professor Skoda was of opinion that the obliteration of the aorta was due either to a complete obliteration or absence of the corresponding portion of aorta in the foetus, or to the contraction of the latter coincidently with the ductus botalli, owing to the exceptional extension of the tissue of this channel into the coats of the aorta. Professor Skoda maintained that the obliteration could not be set down to inflammation, as arteritis led, not to obliteration, but to aneurism. He referred to an analogous case which had occurred in his wards some years previously, where no disturbance of function was manifested until, accidentally, endocarditis supervened. Death occurred later from pneumonia; and the obliterated aorta has been preserved in the anatomical museum of Vienna.—[*Ibid.*]

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*Case of Punctured Fracture of the Cranium, and Wound of the Brain, with loss of Cerebral Matter, without the occurrence of corresponding serious symptoms.* By M. MORTON DOWLER, M. D., of New Orleans.

Instances of recovery after the most formidable injuries of the brain are not frequently recorded, and have, in some cases, not a little contributed to overthrow the theories of physiologists and psychologists, demolishing, at once, as with a "knock-down argument," the skullbump psychology. The crowning case of Gage, related in the July, 1850, number of the "*American Journal of the Medical Sciences*," affords an exemplification, which coming from a less reliable source, would be regarded as almost incredible.

It has been seen in this case that a tapering iron bar, of the length of three feet seven inches, and of the diameter of one inch and a quarter, may enter beneath the zygoma, and pass out at the junction of the sagittal with the coronal suture, passing through the anterior lobe of the left cerebral hemisphere, and that the subsequent report may be, as in this case, that "the patient has quite recovered his faculties of body and mind, with the loss only of the sight of the injured eye." Nevertheless, whatever may be the deductions afforded by exceptional and extraordinary cases such as this, all surgery gives us emphatic warning that in cases attended with any manner of lesion of the brain, its blood-vessels, its meninges, or its bony protection, the gravest and most serious results should always be apprehended and guarded against, on the part of the attendant. A patient whose brain has been laid open, and the proper substance of the same wounded, should be considered as being in both immediate and ultimate peril, and should no urgent or alarming symptoms whatever occur during the treatment of such case, it may be considered as a remarkable exception, and the more especially where the patient is of tender age, and has received a severe punctured wound. Of such exceptional kind is the following case, which is not like the case of Gage, given as an extraordinary case of mere recovery, but as exemplifying recovery without any symptom corresponding to the gravity of the injury sustained, being in this respect the most remarkable I have ever witnessed.

On the 3d day of September last, a little boy, Louis, son of Mr. R. D. Maclin, of the Fourth District of this city, received a punctured fracture of the skull, and penetrating wound of the brain, under the following circumstances: a negro servant girl ascended a shed, about 12 feet from the ground, for the purpose of driving a nail, using, in place of a hammer, a large male hinge, weighing nearly two pounds, which had been drawn from the post of a wide gateway; and after effecting her object, without taking the precaution to look downwards, she threw forcibly from her hand the hinge, which descending, struck the child on the parietal bone of the left side, an inch and three-fourths from the coronal, and one inch from the sagittal suture, the post-spike of the hinge presenting, and entering the brain. The child was at the time sitting with the head erect, and the iron entered in nearly a perpendicular direction. The spike of this formidable iron is a four-sided body, six inches long, gradually tapering on all sides, but so flattened laterally as to tripple the width of the horizontal surfaces, thus terminating in a wedge, the edge of which is half an inch long, and which is dull and battered. The iron penetrated about an inch, passing into the medullary matter of the brain, making by the tapering spike, an external opening three-fourths of an inch long, and one-fourth of an inch wide. The great weight of the butt end of the hinge, and its slight deviation from the perpendicu-

lar direction of the spike, caused it to be swayed over across the sagittal suture, the thin parietal bone affording no other resistance than as a fulcrum on which the whole iron became a lever of the first kind, to injure the brain in the direction of the parietal protuberance, and the child's body was thereby drawn over to the right, and he was found with the right side of his head on the ground. Mrs. Maclin ran to the child's relief, and drew out the huge spike from his head, and she saw particles of cerebral matter adhering to the rough, rusty iron, and also escape from the wound. The blood at first escaped pretty freely, but soon ceased to flow. The force and weight of the iron was such, that it produced a simple oblong opening the exact shape of the spike, without there occurring any surrounding depression, or radiating fracture, the displaced bone being comminuted into small particles, as is believed. But few of these latter were ever found, and must have cleared the wound during suppuration, otherwise they involve a mystery. After the transient primary shock had subsided, none of the symptoms of concussion or compression of the brain manifested themselves; nor did they subsequently, the child relating to his father, in an hour afterwards, how the accident happened, and inquiring "if he must die" from the injury.

Dr. W. P. Sunderland, the family physician, was sent for, and was soon in attendance. Very reasonably regarding the case as one likely to be attended with the gravest consequences, it resulted that I met him in consultation, and was fully impressed with the justice of his apprehensions. He had sponged the wound, and made the only topical application subsequently resorted to—a simple compress saturated with cold water. We engaged to meet twice a day and watch the progress of the case. The patient never at any time labored under any apparent urgent symptoms, excepting during the second and third days; nor was any medical treatment found necessary, or resorted to, excepting the administration of an occasional saline aperient. Excepting during these two days, there was but little febrile irritation or pain: there was freedom from delirium, from coma, and the intellectual manifestations were unchanged, the wound soon beginning to suppurate, and to rapidly heal.

During the second and third days there was considerable nausea and uneasiness of the stomach. The patient was kept for many days strictly in the recumbent position. I discontinued visiting him at the end of ten days, and he was subsequently under the care of Dr. Sunderland. Towards the close of December the wound completely healed, and a firm membranous cicatrix now shows the seat of the injury. The patient is a child of great intelligence, and his faculties have in no way suffered from a wound in which there has been a loss of cerebral matter amounting, as Dr. Sunderland and myself both estimate, to at least a drachm in weight.



In neither the effects of injuries nor from the effects of remedies can we calculate on uniform results. The most inexplicable peculiarities and individualities interpose themselves, so as to render an ordinarily salutary remedy pernicious and an ordinarily fatal injury a thing of ready cure. Much here remains to be elucidated before the depths of pathology and therapeutics can be considered as explored.—[*N. O. Med. and Surg. Journal.*]

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*On Simple Ulcer of the Stomach.* By M. CRUVEILHIER.

M. Cruveilhier has recently presented two papers to the Académie des Sciences upon this subject, and the following are the general conclusions:—1. There exists a disease of the stomach that may be anatomically characterised as simple ulcer of the stomach, usually chronic. 2. This lesion, which is far more common than is usually supposed, differs from cancerous ulcer, with which it is generally confounded, in its curability. 3. It is susceptible of complete cicatrization, this being accomplished by means of very firm fibrous tissue, differing essentially from scirrhus, with which it has been confounded. 4. When the ulcer penetrates through the whole of the coats of the stomach, the loss of substance is repaired by surrounding organs, which also sometimes participate in the ulceration. 5. Danger may continue even after the cure of the ulcer, as the cicatrix often becomes the seat of consecutive ulceration, with all its attendant accidents. 6. It is one of the most frequent causes of blackish vomiting and dejections, and the most frequent one of hæmorrhage of the stomach whether accompanied by hæmatemesis or not. 7. Simple ulcer is the most frequent cause of perforation of the stomach. 8. The two principal accidents are hæmorrhage and perforation, which take place more commonly consecutively, *i. e.*, by the erosion of the cicatrix, than primarily, or during the period of formation of the ulcer. 9. This ulcer, or ulcerative gastritis, may be always suspected, and almost always positively diagnosed. 10. It is distinguished from idiopathic gastralgia by the permanence of the symptoms it gives rise to, although these have alternations of exasperation and remission. Gastralgia is only temporary, comes and goes suddenly, leaving no traces of its presence, and may be suddenly relieved by opiates. 11. It is distinguished from non-ulcerative gastritis and gastralgia by black vomit and stools. It is very probable, however, that simple ulcer may exist without these discharges, and then its diagnosis from gastritis would be difficult. These black discharges are not characteristic of cancer; and, to some extent, are more inherent to simple ulcer than to it, for they belong to all periods of simple ulcer, of which they constitute the first symptom, while cancerous ulcer is not attended with them until the last stage, and sometimes not at all. 12. The

distinctions between simple and cancerous ulcer are founded on, first, the physical signs, there being no tumor in the former; and, next, on the pain which is often absent in cancer but never in ulcer. The pain in the latter is like that of an open wound or burn, opposite the xyphoid appendix, striking through to the spine. In cancer there are cramps or spasmodic contractions, with induration of the stomach. 13. The true touchstone is the effect of alimentary regimen, which completely fails in cancer, but succeeds surprisingly in ulcer. 14. The great object in treating the disease is to find an aliment that is tolerated by the stomach without pain, for then the cure may soon be effected. In the immense majority of cases, milk diet induces improvement from the very first day, and sometimes operates like magic; but when it ceases to be agreeable to the patient, or fatigues the stomach, we must unite it with other substances, in the choice of which the instincts of the stomach must be consulted. Alimentary regimen, in fact, constitutes the entire treatment, but nothing can be more difficult than the direction of this, according to quantity, quality, repetition, preparation, and temperature. 15. Medicinal substances, whether general or topical, are quite secondary in importance. Iron and bitters are quite contra-indicated; and opium only succeeds when gastralgia is associated with the inflammatory action. Gaseous waters, ice, alkalis, and especially phosphate of lime prepared by the calcination of bone, alkaline and gelatinous baths, cold ablution of the entire surface, (in some cases very hot ablutions,) cold baths, and, in some cases, very hot sitting baths, stimulant frictions, with shampooing of the entire surface, derivatives or revulsives applied to the epigastrium—are the means which have seemed to exert most influence on the progress of the disease. 16. It must never be forgotten, that this ulcer is very liable to relapse, such relapse sometimes going on to hæmorrhage or perforation. Such relapse may be certainly prevented by a good alimentary hygiene, and avoiding medicinal stimuli.—[*Comptes Rendus. Med. Times and Gazette.*

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*Treatment of Typhoid Fever with Tar Water.* By Dr. CHAPELLE, of Angoulême. (Translated for the Charleston Medical Journal and Review.)

Having observed the favorable effect of tar in a certain case of Typhoid fever, Dr. C. was induced to pay particular attention to this remedy, in a series of cases occurring during the typhoid epidemic of 1854, 1855. His conclusion is, that liquid tar, if not an absolute specific, is yet incontestably the most efficacious agent yet discovered for the treatment of the above mentioned disease. The tar should be administered internally, as a drink, and in the form of an injection.

The drink is prepared in the following manner: About 3ij. of liquid tar are put into a vessel, containing nearly a quart of hot water; after it has stood a few hours, the patient commences to drink it, filling up with ordinary water after each draught, so that the same dose of tar will last during the whole treatment. The injection is prepared by rubbing up the yellow of one or two eggs with a table-spoonful of liquid tar, and diluting with a little more than a pint of warm water; this serves for two injections.

The patient should drink as much of the draught as he can; as to the injection, that should be insisted on in proportion as the drink disgusts, for the intestines should be always kept supplied with a certain quantity. Sometimes six, eight, and even ten enemata should be administered in twenty-four hours. Should the patient be taken with diarrhœa, these injections check it promptly.

This treatment, if continued for two or three days, generally triumphs over the typhoid state. Typhoid fever of ordinary intensity, called usually mucous fever, needs double that time; but typhoid fever, properly so-called, of whatever form, is vanquished in its essential phenomena in eight to ten days. Each day the skin loses its dryness and heat, the tongue becomes clearer, the abdomen presents less tension and susceptibility, the sleep is calmer, the fecal matter acquires a more normal odor, and the digestive functions recover strength. When there exists only a simple typhoid state, the tar draught alone is commonly sufficient; but when the general perturbation augments, the febrile re-action increases, and the functional disorder is excessive, a much stronger dose of the tar is required, and the injections are then indispensable. In all cases where the breast or the head has been affected with violent perturbation, the disappearance of the ordinary typhoid phenomena does not immediately produce a cessation of these complications. These functional disorders either disappear gradually of themselves, or need the application of treatment appropriate to the morbid state.—[*Rev. Med. Chirurg.*]

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*Fungus Hæmatodes, cured by Chloride of Zinc.* By F. J. COGLEY, Madison, Indiana.

In February, 1856, I excised from Mr. P. M., aged twenty-four, an enormously enlarged testicle, which on examination proved to be, unequivocally, *medullary sarcoma*. There is not a larger, or purer specimen, of medullary cancer in the British or French museums. About the middle of January, the wound being nearly healed, he returned to his home; but soon found it would not entirely close. He returned to me the first of March, with a bleeding fungus, the size of a hen's egg, protruding from the small portion of the wound, which had refused to heal. It was, beyond doubt, *fungus hæmatodes*.

I transfixed the base of the tumor, with two sharp pointed



probes, crossing each other at right angles, and involving considerable sound tissue: then applied a strong ligature below the probes, in order to prevent hæmorrhage; afterwards I protected the scrotum from the zinc, by muslin strips passed round under the probes. After removing a portion of the fungus with the scissors, I applied the chloride of zinc in its purity, and continued its application until the fungus was entirely destroyed. In a few days, a very deep eschar came away, and the ulcer healed very rapidly, so that in twenty days, he again went home with the wound entirely closed. It is my decided opinion, that if I had excised this fungus, it would have been rapidly reproduced; nor do I believe that any "combination" of "chlorides"\* could have enhanced the value of the application.

This patient has had a slight cough, with bloody expectoration for more than a year; his general appearance cachectic; and it seems more than probable he has fungi in his lungs, but is enjoying tolerable health.—[*Lancet*.

#### *Chloric Ether in Diarrhœa.*

Diarrhœa of a painful character, and attended by spasmodic action, has been relieved in England by the use of chloric ether, after having resisted opium and a multitude of other remedies. "The effect of ether in every case was marvelous. The spasms and pains were relieved as by a charm; the diarrhœa ceased; warmth returned to the extremities; the pulse, before perhaps flagging, increased in force and volume. The relapses were unfrequent, and were generally checked at once by a single dose." The same treatment was found efficacious in an epidemic diarrhœa, which was supposed to be premonitory of cholera. "Hundreds of cases in which alarming cramps existed, were cured like magic.—[*New Hampshire Jour*.

#### *Antidote to Strychnia.*

M. Guiboust lately stated to the Academy of Medicine that, having observed a dog in violent convulsions, in consequence of eating one of the compound balls containing strychnia, he forcibly made it swallow powdered gall-nuts, when the convulsions ceased immediately. Ipecacuana was then given to the animal, but the latter could not vomit. The next day milk was given to it and manna, after which the dog recovered. M. Caventon said that the infusion of gall was a very effectual opponent to vomiting, and that he had observed it destroy the power of Tartar Emetic. M. Orfila had already advised the administration of this infusion in cases of poisoning by opium and salts of morphia.—[*Bulletin Universe. Boston Med. and Surg. Journal*.

\* *Lancet*, June, 1855.

## EDITORIAL AND MISCELLANEOUS.

*A Practical Treatise on the Diseases of the Testis, and of the Spermatic Cord and Scrotum.* With numerous wood engravings. By T. B. CURLING, F.R.S., &c., &c. 2d American from the 2d revised and enlarged English edition. Philadelphia: Blanchard & Lea. 1856. 8vo. pp. 420. (For sale by T. Richards & Son.)

The work before us has so generally received the approbation of the profession, that a new edition cannot be otherwise than welcome. Although treating of but one organ, a glance at the table of contents will show that the volume is not too large for the subject. After devoting some space to anatomical considerations, the author studies the congenital malformations, atrophy, and injuries of the testicle. He then devotes special chapters to hydrocele, hematocele, orchitis, tubercular disease of the testicle, carcinoma of the testicle, cystic disease of the testicle; to fibrous, cartilaginous, calcareous and other tumors of the testicles; foetal remains and entozoa in the testicle and scrotum; spermatocele. The nervous affections are comprehended under the heads of irritable testicle and neuralgia; the sympathetic and functional under those of impotency and spermatorrhœa. The affections peculiar to the cord are varicocele, tumors, and spasms of the cremaster. The work closes with a full review of the diseases of the scrotum; as injuries, prurigo, varicose veins, pneumatocele, œdema, diffuse inflammation, mortification, elephantiasis, tumors, cancers, &c.

This volume is essentially practical, and treats of diseases of every day occurrence. It should be in the hands of all physicians.

*Digestion and its Derangements. The principles of rational medicine applied to the disorders of the Alimentary Canal.* By THOS. K. CHAMBERS, M.D., F.C.P., &c., &c. N. York: S. S. & W. Wood. 1856. 8vo. pp. 440. (For sale by Geo. A. Oates.)

The publication of a new monograph on Digestion is rendered necessary by the developments of experimental and chemical physiology; and although we have not yet been able to study the work before us, we have seen enough to induce a desire to know more of it, and to advise others to read it attentively. We have no doubt that it is a very valuable addition to our stock of practical monographs.

*The Causes and Curative Treatment of Sterility; with a preliminary statement of the Physiology of Generation.* With colored lithographs and numerous wood-cut illustrations. By AUG. K. GARDNER, A.M., M.D., &c., &c. N. York: DeWitt & Davenport. 1856. 8vo. pp. 175.

The very interesting subject of this work, as well as the creditable manner in which it is treated, will command for it a ready acceptance by the profession. It does great credit to American medical authorship, and

proves that good books may be made in this, as well as in any other country.

*Clinical Lectures on the Diseases of Women and Children.* By GUNNING S. BEDFORD, M.D., Prof. &c. in the University of N. York. 3d edition, carefully revised and enlarged. S. S. & W. Wood. New-York: 1856. 8vo. pp. 600. (For sale by Geo. A. Oates.)

We are happy to find that the favorable opinion of this work, advanced by us upon the reception of the first edition, is fully sustained by the profession, as is evinced by the demand in so short a time for a third edition. The present volume contains much new matter of interest. We cheerfully reiterate our former commendation.

*Obstetric Tables.* By DR. PAJOT, agregé Professor, &c., Paris. Translated from the French, and arranged by O. A. CRENSHAW, M.D., and G. B. McCaw, M.D., of Richmond, Va. With three additional tables on the mechanism of natural, unnatural, and complex labor. By N. P. RICE, M.D., of N. York. Richmond Enquirer Press. 1856. 4to.

These tables will prove exceedingly valuable helps to the student, and may be consulted with advantage by practitioners who desire to refresh the memory, in the midst of professional engagements.

*Headaches—their Causes and their Cure.* By H. F. G. WRIGHT, M.D., &c., &c. N. York: S. S. & W. Wood. 1856. 12mo. pp. 122.

This little volume treats of "Headaches in childhood and youth," of "Headaches in adult life," including such as are dependant upon the circulating, the digestive and the nervous systems; and finally, of headaches in old age. We would advise its careful perusal, for these affections are very little understood in general, and often wofully misunderstood.

*The Medical Profession in Ancient Times.* By JOHN WATSON, M.D., Surgeon to the New-York Hospital. N. York: Baker & Godwin, printers. 1856.

This interesting contribution to the history of medicine, was made in the form of an anniversary discourse, delivered before the New-York Academy of Medicine, in November last. It is indicative of great erudition on the part of the learned author, and will be read with pleasure by the profession.

*Pronouncing Medical Lexicon, containing the correct pronunciation and definition of most of the terms used by speakers and writers on Medicine and the Collateral Sciences; with addenda.* By C. H. CLEVELAND, M. D., &c. 2d edition. Cincinnati: Longby Brothers. 1856. 18mo. pp. 300.

The use of a phonetic alphabet in illustrating the pronunciation of words, renders it necessary to learn *that* in order to understand *this*. We have not, therefore, yet had leisure to enable ourselves to judge correctly of the



merits of the little lexicon. This is the work, sometime ago, stigmatized as a plagiarism. We know nothing about the correctness of the charge, but it would seem to be difficult to make a dictionary, especially a condensed one, that would be materially different from its predecessors.

*Two pieces of Needle removed from the Thigh after a sojourn of forty-five years*—On the 9th of February, 1856, Mr. Ebenezer Byram, aged 53 years, presented himself at my office for the purpose of having his thigh examined, which, he said, was swollen, as his physician told him, from the "fever settling in it," he having had a spell of typhoid fever some twelve months previous. On exposing the limb, I found the thigh, on its external side, much swollen, red and inflamed; the surrounding parts being quite hard, and about the centre of the thigh, on its external side, was a small soft space about the size of a silver dollar, which fluctuated on percussion, showing that a quantity of matter was contained within. I plunged a large abscess lancet into this soft space, and discharged about a gill of thin yellowish fluid. I then introduced the probe, and after searching for some time, felt the probe grate against some foreign body. I immediately withdrew the probe and introduced a small pair of forceps, and laid hold of the substance, and withdrew two bits of what appeared to have been a large sewing needle; each piece was near three-fourths of an inch in length. After introducing a tent, and dressing the wound, I made enquiry concerning his previous history. He informed me, that when about eight years of age, he had what his parents called white swelling; the symptoms then were great swelling, pain, and redness of the thigh, which continued to trouble and pain him for twelve months; but at no time did it ever discharge matter, but gradually subsided, and at the end of twelve months he suffered little or no inconvenience from it, except on sitting in "a certain manner" in a chair, or in riding on horse-back, if he pressed the parts "a certain way," they would feel as though something were sticking in him; these continued to be his symptoms up to September, 1855, when the pain, redness, and swelling increased and gave him so much trouble, as to induce him to seek advice; and the above is the history and the result.

[*N. O. Med. and Surg. Journal.*]

*Hydrophobia*.—Dr. T. W. Blatchford, of Troy, in his paper on hydrophobia, read before the American Medical Association at its late meeting in Detroit, reports the following curious facts, as having taken place in Prussia:

In 1810 there were in that kingdom 104 deaths from hydrophobia; in 1811, 117; in '12, 101; in '13, 85; in '14, 127; in '15, 79; in '16, 201; in '17, 228; in '18, 260; in '19, 356, making a total of 1,658 deaths in 10 years in Prussia alone. It is mentioned also as a curious fact, that in Cyprus and Egypt hydrophobia never has been known to occur. It is believed also that the disease is incident to no particular month in the year, as statistics show on the whole as many deaths at one month in the year as any other—there being no real difference between summer and winter. Dr. B. believed that the constitutional irascibility of the dog was the true etiology of canine madness, and that excision is the only means now known which affords any reasonable hope of successful prevention. The report

pronounced as an utter fallacy the general idea that the dog-star has anything to do with the origin of virus in the dog, or that summer has any special preponderance over winter in the existence of cases of hydrophobia. The facts submitted, and which had been collected by the Committee, show the following facts:

Out of 72 cases, 54 were bitten by dogs, 6 by cats, 1 by a raccoon, and 1 by a cow. Out of 62 cases, 4 died the first day, 9 the second, 6 the third, 18 the fourth, 4 the fifth, 2 on each the sixth, seventh, and tenth days, and one on the twenty-first. That 22 cases occurred in March, April and May; 17 the next quarter; 18 the next; and 22 the last. The average of the time of sickness was 66 days; but this lengthy average was enhanced by two strongly marked cases, lasting 365 and 360 days respectively. The usual average is 41 days.—[*N. Y. Med. Times.*

*A New Instrument for Indicating the Movement of the Heart.*—Dr. Scott, Alison has exhibited an instrument to the Royal Society which he calls a sphygmoscope, and employs it to indicate the movements of the heart and bloodvessels. The construction is simple: a small glass tube, about a foot in length, open at the upper end, and with a graduated ivory scale affixed, terminates below in a hemispherical or trumpet-mouth, bent to a right angle with a tube. This mouth is covered with a water-proof membrane, and, being filled with colored water, is to be pressed against the ribs where the movement of the heart is most sensible. At once the water starts up the tube, in which it is seen to rise and fall with every beat; and thus all the movements of the vital organ, whether regular or irregular, may be distinctly viewed and measured by means of the scale. A smaller instrument of the same kind will show the beating of the pulse or of any other bloodvessel, however small; and the beats may be compared with those of the heart. They are perceptible even at the end of an India rubber tube two feet in length. Already some new physiological conclusions have been arrived at with regard to the circulation of the blood, and a further insight into vital action is hoped for from the general use of the sphygmoscope among medical practitioners.—[*Boston Med. and Surg. Journal.*

*Liquid Caoutchouc.*—This is said to be of the color and consistency of milk, and is preserved in the fluid state by the addition of free ammonia. As an external application, it has many advantages over both collodion, and guta percha dissolved in chloroform. It is not stimulating and painful, as are both the others in certain cases; it does not contract, like collodion; and on account of its elasticity, it allows entire freedom of motion. Water does not act upon or remove it; and it adheres closely to the skin. In the treatment of burns, erysipelas, and many other surgical diseases which require exclusion of the atmosphere, it answers the purpose so perfectly, as to render any other preparation scarcely desirable.—[*Ibid.*

*After Pains and Hemorrhage.*—These difficulties, which so often follow delivery, and are so little under the control of remedies, have been forestalled and prevented by a French accoucheur, by the exhibition of ergot during delivery, and injecting cold water into the umbilical vein immediately after delivery. The object is to produce such tonic contractions of the uterus, as will prevent the accumulation of blood or other fluids in the

uterine cavity, the expulsion of which causes pain. Even cases in which ergot had not been used, it was found that the injection of five or six ounces of cold water into the umbilical vein, caused an immediate expulsion of the placenta; and the usual suffering of the woman from after-pains was avoided. The cord is cut to the length of some twelve or fifteen inches; and then a small nozzle of a syringe holding five or six ounces, or a small canula, can be inserted into the vein, and the injection made without difficulty—[*Ib.*

*Consumption of Quinine.*—The Philadelphia Medical and Surgical Journal says that 300,000 ounces of Quinine are annually consumed in the United States, meaning, it is presumed, imported, as there are two very large manufacturing establishments in this country which prepare it on an extensive scale, and which are not included in the computation of the Secretary of the Treasury, from which the above estimate is derived. It is worth, at the present time, from \$3 to \$4 the ounce.—[*Peninsular Jour. of Medicine.*

*New Hæmostatic.*—Dr. Butler, of Ohio, recommends a scruple of tannic acid to be dissolved in an ounce of elixir of vitriol, and 15 drops to be given as a dose—in menorrhagia, etc.—[*American Jour. of Pharmacy.*

*On a Composition for Attaching Labels.* By FREDERICK STEARNS, Pharmaceutist—Having noticed in the March number, the present year, of the American Journal of Pharmacy, an article upon "Unalterable Labels for the Cellar," it occurred to me that the method I have employed for some years, in giving adhesiveness to dispensing and other labels, might be of some service to the readers of the Journal. It is as follows:

Take of white glue (Cooper's best) three ounces, (avoir.); refined sugar one and a half ounces; water ten fluid ounces, or a sufficient quantity. Dissolve by the aid of a water-bath, and use while warm, applying it by means of a suitable brush to the reverse side of the labels while uncut or in sheets. After being dried and moderately pressed they are ready for cutting. A little experience will show the propriety of increasing or lessening the amount of water used; for instance, if the paper is thin and well sized, more may be added; on the contrary, if the paper be thick and without sizing, less is required; in all cases it should be quickly and evenly spread upon the paper.

It is not applicable to the purpose of a common paste, as it can only be used while warm.

I have found the use of it to possess these advantages: Labels prepared with it adhere more firmly than when any other adhesive substance is used; it does not penetrate, and thus disfigure the label, and when applied to glass they never become loose, as is often the case when acacia and tragacanth are used, when moistened with saliva. No disagreeable impression is left in the mouth, as with dextrine, and it would well supply the place of that material upon Post Office stamps, gum tickets, etc.—[*American Jour. of Pharmacy.*



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## ORIGINAL AND ECLECTIC.

### ARTICLE XXIII.

*An Essay upon the Relation of Bilious and Yellow Fever—prepared at the request of, and read before, the Medical Society of the State of Georgia, at its session held at Macon on the 9th April, 1856.* By RICHARD D. ARNOLD, M. D., Professor of the Theory and Practice of Medicine in the Savannah Medical College.

The subject about to be discussed by me, in compliance with the appointment of the Society, is—THE RELATION OF BILIOUS AND YELLOW FEVER.

At first sight, this may appear to be a question of very little practical utility, and one upon which there is little contrariety of opinion. But when I recollect the change which years and experience have wrought in my own opinions, and when I see taught in medical text-books views so totally dissimilar to those I now entertain on the subject, I have not been unwilling to endeavor to convey to the society what I conceive to be the true relations between Bilious and Yellow fever. In doing so, I shall not pretend to give a history of either Bilious or Yellow fever, nor shall I bring any bibliographical array to support my views: not that I underrate the value of books, for without a proper knowledge of what has been learned and taught before our day, we would be little better than blind mill-horses, constantly pursuing one narrow

circuit; but, because the subject is a strictly practical one, which must be decided by the weight of testimony.

Each observer must bring in his mite of observation, add his grain to the mound of true knowledge; "and, as the laborious ant—

——— *Trahit quodcumque potest, atque addit acervo  
Quem struit, haud ignara ac non incauta futuri.*

While Yellow fever has never been known to prevail in climates and localities where Bilious fever was not endemic—Bilious fever, in its most malignant form, is known to prevail where Yellow fever has never been seen. Having practised for more than twenty-five years in one of those localities where Bilious fever is annually endemic, and Yellow fever only an occasional visitor, I feel that I have been placed in a position which has given me some advantages in treating of this subject. Two opinions have prevailed amongst those who have judged from this fact: first, that Yellow fever, occurring as it does where Bilious fever is endemic, is but a higher grade of the same disease, produced by the same causes, acting in greater intensity; second, that Yellow fever is a disease *sui generis*, having no analogy nor connection with Bilious fever, not produced by any local causes, but *invariably* imported from abroad, therefore to be kept away by quarantines and all their inhuman vexations and costly consequences. I shall proceed to consider these two opinions in their order.

1st. *Is Yellow Fever only a higher grade of Bilious Fever?*—The first time I ever saw a case of Yellow fever was, while a pupil of the late Dr. Wm. R. Waring, in the summer of 1827. No man in the southern country was better acquainted with our fevers than he was. He had seen them in various localities while a surgeon in the army; he had seen them in all their violence in our own city—before the dry culture system, by removing the culture of rice, with its concomitant evils, from under our very door sills, had so favorably modified the type of Bilious fever as met with in the city proper; he had been through our then recent epidemic of Yellow fever of 1820, from the beginning to the end; in company with the distinguished Chervin, he had conducted a series of post-mortem examinations of Yellow fever subjects, and he could thus "speak by the card." During the fall of 1827, Yellow fever broke out in our city: it did not prevail very extensively; for, occurring late in the season, its mighty destroyer, frost, put an end to it before it had time to spread extensively.

It was my privilege to conduct all the post-mortem examinations made by my preceptor during that season. Is it any wonder that I should have considered him my medical Gamaliel, and have sat reverently at his footstool? Among the opinions held by my distinguished preceptor was this identical one, that Yellow fever was but a higher grade of Bilious fever. *He* had imbibed this from *his* preceptor, the celebrated Rush; it descended in a straight line to me, and many years rolled by before I dared to question its accuracy; and I did not do so, until repeated observations had given me data on which to base my belief. Such is the power of authority, which too often trammels us in our researches. In fact, in our views of general affairs in this world, of politics, of religion, &c., there are very few who can truly apply as a motto—

*“Nulius addictus jurare in verba magistri.”*

If Yellow fever were only a higher grade of Bilious fever, we ought to see it “cropping out,” whenever there was any unusual intensity, or any greater prevalence of the latter.

I have witnessed every epidemic in the city of Savannah, from the year 1830 up to the present time; I have often known and seen Bilious fever of a malignant congestive type; for fifteen consecutive summers I was the attending physician of the city hospital, whither the worst cases of our ordinary climate fever are conveyed.

When year after year, I met with malignant and fatal cases of Bilious fever, and yet with not a single one of Yellow fever, I began to doubt whether or not I was right in my opinion. Occasionally a few cases of Yellow fever would occur, at intervals of years; these I studied with intense interest. From 1830 up to 1839, I never saw a case of Yellow fever in the city. Its characters were indelibly imprinted on my memory from the experience of 1827. In 1839, the city of Augusta was ravaged by this scourge: it was denied at the time that Yellow fever prevailed there. In the last of August, a patient, fresh from Augusta, entered the city hospital, and died in a couple of days. My then colleague, Dr. P. M. Kollock, and myself examined the body, and found the unmistakable post-mortem appearances of genuine Yellow fever. A short time afterwards, a patient from Charleston entered, and died, and after death presented the same appearances. It is worthy of recollection, that although these cases were placed in the wards of a hospital filled with Bilious fever patients, there



was no propagation of the disease. I still look back upon the year 1839, as the sickliest season I have ever experienced in Savannah, with the exception of our terrible epidemic of 1854. Old inhabitants will recollect it as the driest summer on record, when turnip were planted in the bed of the Savannah river opposite Augusta. It was also a hot summer. Bilious fever prevailed over the whole country, and in a malignant form. Contrary to what would seem the fact at first view, such a season was peculiarly calculated to generate the malaria which is the generally acknowledged cause of Bilious fever. It is conceded that mere moisture will not produce malaria; but mix vegetable matter with water, and subject it to heat, and the most malignant malaria will be generated. That year, swamps and ponds which had been covered with water since they had been known to the white man, were dried up, and the vegetable *debris* which had been precipitating to their bottom for years and years, were exposed to the action of the sun and air, and consequently were decomposed, and generated malaria. Now, Bilious fever prevailed with great violence in our city from early in July. I cannot imagine more favorable circumstances for the spread of Yellow fever than accompanied the introduction of those two cases in our city. Later in the season, I did meet with several cases of Yellow fever, but they were so few in number that I did not consider them as entitled to be considered epidemic. They were isolated, occurred in different parts of the city, and had not the slightest connection with the cases of the hospital. I considered them sporadic, and they most undoubtedly originated on the spot.

I met with one solitary case of Yellow fever, with black vomit in the fall of 1840. She was an unacclimated foreign lady, who had not stirred out of the city during the whole summer, nor had she even peeled a banana from Havana.

In March, 1841, a case was brought to the hospital from Demerara, and in October of the same year a case occurred in my private practice, both of which were reported by me in the *American Journal of the Medical Sciences* for October, 1842.

A few cases occurred at the hospital late in the fall of that year. I found the post-mortem appearances so similar in all the cases I had examined, from 1827 up to this time, that I was convinced that Yellow fever must be a disease *sui generis*. It was with increased interest, that during the summers of 1843, 4, 5, 6, 7, 8, 9,

I examined every case of fever which died at the hospital. Neither during life, while attending them, nor after death, did I find any signs to make me ever suspect that Yellow fever had existed. With the exception of a sporadic case in June, 1852, I met with no Yellow fever until the fall of 1852. Late in September, an unacclimated painter was attacked with it in the north-eastern portion of the city: he had been working here all summer, and had had no connection with Charleston or Havana. He was removed to the hospital after he had thrown up black vomit, and he died. I had resigned my post as physician there in 1850, and was not attending. An autopsy was made, at which I was present. Before it was done, I stated to the attendants what morbid appearances I expected to see; and they turned out exactly as described beforehand. The fever began to show itself in several places about the middle of October; but, fortunately, a frost early in November cut it short. I examined several subjects who died of it, and found the same peculiar morbid appearances. In 1854, it was my lot again, as in 1852, to have the first Yellow fever patient. I was called in on the night of the 3d August, and he died on the morning of the 5th, after having discharged quarts of genuine black vomit. My last case of Yellow fever, with black vomit, died on the 27th November. In the intermediate time, I had seen hundreds of cases of genuine Yellow fever.

I had made post-mortem examinations in the beginning, the middle, and the end of our epidemic, under the broiling sun of August, the more temperate atmosphere of the latter end of September and October, and the almost cool temperature of November, and I found nothing new. From the beginning to the end, I found the same morbid appearances. Of course I do not mean that each case was an exact copy of the other; but just as all cases of genuine Typhoid fever present the same morbid appearances, although the patches of Peyer may be more ulcerated in one case than in the other, or in some cases they may be enlarged without being ulcerated.

Now, the morbid appearances after Bilious fever have never, in my experience, approximated those after Yellow fever; and the symptoms during life have presented wide and marked differences. Let us devote a little attention to these two conditions.

It is well known that all fevers have many symptoms in common in their beginning, such as headache, lassitude, pain in the

limbs, &c.; and that merely from such symptoms it would be impossible for the most experienced and skilful practitioner to diagnose the particular kind of fever presented to him. He must wait the progress of the case, and the development of the characteristic symptoms, before he can decide. Of course I speak of the inception of the disease. Certain fevers come on, as a general rule, more suddenly than others; but the rule is not invariable, and we would be at a loss to make a correct decision if we depended merely on the first phenomena of febrile disturbance.

Moreover, some cases of well-known specific exanthematous diseases are developed so imperfectly that we are at a loss to decide, positively, whether or not the patient has had the genuine disease. Every practitioner of any experience must have met with such cases of Scarlet fever and Measles. Yet no one has ever, in latter days, denied that they are distinct and peculiar diseases, although a little more than a century ago Measles was confounded with Small-pox.

I do not deny that, when no suspicion is aroused, sometimes the first notice the physician has that he is treating a case of Yellow fever, is the appearance of the fatal black vomit. But even in epidemics of Yellow fever, black vomit often supervenes when the patient has apparently passed the point of danger and offered no untoward symptoms.

Nor must it be supposed that all cases of genuine Yellow fever appeared in one stereotyped edition. There was every variety of grade and intensity, from the ephemeral attack of twelve hours of fever, followed by speedy convalescence, to the more prolonged paroxysm of seventy-two hours, ushering in a malignant or a fatal case. Yellow fever is essentially a fever of one paroxysm; but that paroxysm is of very unequal duration, as just intimated. Now, if the access of fever should not be very marked, it could not be distinguished at first. Again: there are some cases which are ushered in with such marked symptoms that your suspicions would be at once aroused. The first case with which I met, in 1854, was one of this nature. There had been no unusual severity in the fevers which had occurred up to that time. The summer had been the very hottest I had ever experienced, and what is very rare many fatal cases of *coup de soleil* had occurred. I was called to see my patient at night (3d of August); he had taken comp. blue pill: he offered the usual symptoms of fever—pain in the



head, in the loins, over the upper part of the sacrum, down the thighs; a hot, dry skin, and accelerated pulse. I directed a demulcent drink, and that a dose of castor oil should be administered the next morning early. On my visit the next morning, I found him with a raging fever; intense headache; blood-shot, shining, watery, smoke affected eyes; a full, bounding, but not very frequent pulse; a constant retching, and quite delirious. The landlady said to me, "Doctor, what kind of a fever is this?" I replied, "It is first-cousin to Yellow fever." I bled him, and applied a blister to the epigastrium, and directed cold demulcent drinks. The fever continued unabated all that day and the ensuing night. On the morning of the 5th of August, on my visit, they showed me a large wash-hand basin filled with matter, which I pronounced black vomit. He continued to eject large quantities of it, and at noon he died. This man was a carpenter by trade, a northerner; it was his first summer south; he had been working on the roof of a house which was just finishing, and before he had moved to the place where he was then boarding, had lived in Curry town, the extreme south-western portion of the city, and had walked nearly a mile two or three times daily to and from his work, which was in the north-eastern portion of the city, through the broiling sun. It is again to be noticed that not a single other death occurred in that house during the season. After the epidemic became a fixed fact, and cases had occurred all over that section of the city, two of the inmates had the fever, but it was in a mild form. There was not any loop-hole whereon to hang even a suspicion that this man's disease had been contracted any where out of the limits of the city—no "low, long, black-hulled schooner" had just arrived from the West Indies to afford an easy solution of how Yellow fever had attacked a denizen of Savannah. The house was a mechanics' boarding-house. A great panic ensued; but I am yet to learn that any boarder contracted the disease from this case.

The next afternoon, the 6th August, I was called by Dr. Jas. B. Read to see a case on the extreme eastern edge of the city, many squares distant from the first case. The patient was a young German girl, entirely unacclimated; the house where she lay was on the eastern bluff of the city, overlooking the low swampy grounds in that direction; it was amply ventilated, standing isolated in a large lot. She had been engaged sewing decorations at the theatre, distant about three-quarters of a mile,

and had walked to and from it in the hot sun, during the whole season. Unfortunately there was no doubt about the case; she was moribund, with black vomit thrown up all about her.

On the afternoon of the 5th, I was called to see a patient in Congress-street, about a hundred yards to the north-east of my first patient, but in a different street. His fever did not attract my attention particularly. He was of a lymphatic temperament, a northerner who had resided several years in the city, and whom I had attended some summers before in a very severe attack of bilious fever. His fever was not very high; he complained of pain and languor. I gave a dose of blue pill, and directed oil the ensuing morning. On the 6th his medicine purged him and he was better. On the 7th, when I called to see him, he had left the house and gone to his business. On the evening of the 8th I was called to him: I found him with a slow pulse, a cool skin, and a constant retching, ejecting glairy matter, and no bile.

For the first time, I suspected Yellow fever, and that the cessation of the fever had been the calm which follows the single paroxysm of that fever. I ordered a blister to epigastrium, ice to suck, and iced gum water for a drink, and my alterative powders, (two grains of calomel, and one sixth of a grain of opium,) every two hours. On the 9th, he was much the same, except that the prostration was greater, so as to seem to threaten death from sheer exhaustion. Towards night, I discovered flocculi of black vomit in his vomit. He continued to throw up the black vomit mixed with a good deal of mucus, all that night, and all the next day, and died on the night of the eleventh. The quantity ejected was not very great, and it was thrown up with a great deal of straining and mixed with mucus. He sank away gradually and gently, like one yielding to the effects of a depressing poison, without the power of reaction.

Let us contrast the first case and this: The first case occurred in an unacclimated subject—it was violent from beginning to end. The last occurred in an acclimated subject—it was slow in its progress, less marked in the first stage, but running its stage of calm and secondary fever as is most generally seen where death does not occur during or just after the paroxysm of the fever.

Now no *fact* is more notorious than that acclimation to a warm latitude diminishes the susceptibility to yellow fever, and that it is far milder in those who have constantly resided south, summer

and winter, than in those who have not; and who are consequently unacclimated. By this time, the eleventh of August, I had been called to many cases, all in the north-eastern part of the city, but in separate houses and different streets—not in any ways connected with each other, and I could not doubt that we had a different fever to contend with than a bilious remittent fever, and I will now proceed to state the symptoms which brought me to that conclusion. Of course I will state what was the general type.

The invasion of fever was more sudden than in ordinary Bilious fever, and although all fevers will be found to have a cold stage of some kind, it was not well marked in these. There was intense pain in the back, over the last lumbar vertebra and upper part of the sacrum and extending down the thighs along the sciatic nerve. The pain over the eyes, in the frontal region, was excruciating; the eyes were watery, shining, sometimes injected, sometimes not, with the upper lid partially drooping, like one whose eyes were watering from a quantity of smoke. The skin was intensely hot and very dry; the stomach was very irritable; the ejecta were either a serous fluid, bluish green, as if blue vitriol had been dissolved in water; or a glairy, viscid, tenacious mucus. But the pulse was not disturbed in accordance with the general perturbation, it seldom being over a hundred beats to the minute, and very often not more than eighty or ninety. This symptom I have been disposed to look upon as very characteristic. This febrile state lasted from twelve to seventy-two hours, on an average about thirty-six hours, and was succeeded by a cessation of these symptoms, and an apyrexia, but without any critical evacuation whatsoever. After this, in fatal cases, black vomit came on immediately, or it was ushered in by increased irritability of the stomach, it becoming intolerant of the mildest ingesta, by a constant empty straining, and by the most acute sensibility of the epigastrium to any pressure. With this, in most cases, there was the most remarkable depression of strength; in some cases, several hours of a most perfect calm succeeded the paroxysm, and there was nothing to rouse suspicion of danger but a slow pulse, it generally sinking to forty or sixty beats in the minute. When black vomit supervened, a few hours terminated the case. With all this manifest affection of the stomach, the brain, as a general rule, did not sympathise. The intellect was not affected, until the last



closing scenes of life, when the brain gave away in common with the rest of the organism.

This, considering the violence of the febrile paroxysm, must be considered one of the characteristics of Yellow fever. The thirst was great, but the tongue was not generally parched. At this period of the epidemic, the fatal cases terminated quickly; black vomit came on within three or four days, and the patient seldom survived beyond the fifth day. When he did so, the chances were greatly in his favor.

I have sketched only the prominent symptoms. Do they differ from those presented in a case of Bilious fever? Let us take a well developed, well marked case, with which to make our comparison.

A Bilious fever is almost always ushered in with a pretty distinctly marked chill. There are certain symptoms, as stated before, which are common to the various forms of fever, such as weariness, head ache, back ache, &c.; but the invasion of these pains is not so sudden in a Bilious fever. After the cold stage, there is an evident reaction of the system, and a hot stage ensues. This, again, is followed by a third stage, viz., one of sweating; the fever then abates, with a distinct critical evacuation, either by urine or by perspiration; and in a few hours it again begins to increase, and having attained its height a sweating stage again follows; and so the fever goes on, the remissions becoming shorter, the stages less marked, until the system sinks under it; or the paroxysms becomes lighter, the remissions so marked and distinct that they slide into intermissions, and the patient recovers.

MARKED PERIODICITY is the distinctive characteristic of Bilious fever, as far as it has come under my observation.

But there are certain symptoms attending the paroxysms which are quite distinctive. The pulse becomes more accelerated in Bilious fever, ranging far above one hundred, increasing as the fever increases, becoming slower as it abates, presenting, as verified by me, in scores of cases, a variation of forty beats to the minute between my morning and evening visit.

There is headache in Bilious fever, but is not of that intense supra-orbital character as in Yellow fever, and is more diffused over the anterior portions of the brain. There is very frequently great irritability of the stomach in Bilious fevers, and the stomach ejects great quantities of bile. Sometimes the bile may assume a

greenish color. Very often, a severe attack of Bilious fever may present its paroxysms so marked, and the remissions so distinct, that you could with propriety class it in the intermittent variety; still the three stages, of cold, heat, and sweating, can be easily traced and marked in the form of Bilious fever. Now, if Yellow fever was but the highest grade of Bilious or Climate fever, we ought to find the worst cases of the latter closely approximating, if not running into the former. But what are the facts? The congestive type of Bilious fever (as witnessed by me in hundreds of cases) is unquestionably the very worst type of that fever. Every year, however healthy, affords cases of it in those individuals who have been exposed to swamp miasma in their avocations. Watchmen are required at the wharves under the bluff of the city. Savannah lies on a high bluff, forty feet above the level of the tide, and fronts to the north. Northward is a low alluvium extending in a direct line due north, for fully four miles before the high ground of South-Carolina is reached. Hutchinson's Island, immediately opposite to, and north of the city, is under the dry culture contract, which prohibits the planting of rice within a mile of the Exchange; but beyond the back river and on the Carolina side, are vast bodies of land, fully from two to four miles through in a northward direction, and extending east and west for about twelve miles, which are cultivated in rice with all its concomitant moisture. To the northeast of the city, these lands extend to the limit where the water becomes brackish and unfit for the culture of rice. To the direct east of the city, and beyond the limits of the dry culture contract, and on the Georgia mainland are many hundreds of acres of land cultivated in rice. To the north-west of the city, the alluvium takes a bend to the north, affording in that quarter some of the finest rice plantations in South-Carolina. What constitutes the defence of Savannah against the malaria of these low grounds? I answer; that, fortunately, almost the whole northern front of the city is defended by a high row of brick storehouses rising some twenty or thirty feet above the level of the plain on which Savannah stands; which storehouses are not inhabited, and thus afford a *material* bulwark against the introduction of malaria into the city. To the northeast of the city, this protection is not afforded, because the storehouses have not been built up in compact mass *above* the level of the plain of the city, as they have been at the portion of the front

more westwardly. In this portion of the city there are many dwelling houses on Bay-street which are not protected; whenever the winds prevail from the north or north-east, those houses have invariably, and I speak advisedly from many years' experience, afforded the first cases of Bilious fever, and the most malignant types of it every year. I have a patient who lives in this locality. About six years since he moved into his house, and he and his whole family (a wife and three children,) were desperately ill of Bilious fever. I advised him, nay, insisted upon it, giving my reasons, that in the sickly season, when malaria was generated, (say from the first of June until a frost in the fall,) he should keep all the windows on the north side of his house closely shut by the sashes, from early in the evening until the sun was high up in the morning. He has *done* so, to the exemption of his family from fever, and the great curtailment of my professional fees. Such has been my advice to all persons inhabiting houses exposed in a similar manner, and I distinctly aver, that where the advice has been followed, the same result has obtained.

Those individuals whose *liberty* is the practical one so much sighed after by the pseudo-philanthropists of the North, of working or starving, are the ones who take the perilous occupation of watching at night under the bluff, and who are thus exposed to the malaria which may be blown from the north-east, the north, or the north-west, just as the wind may set.

The summer of 1855, was the healthiest I have ever known in the city. Fevers did not rise above the grade of intermittent, as a general rule, yet I met with two cases of congestive fever, both of which were fatal within four days from my first visit, and each individual had contracted his fever, from exposure at night and early in the morning, in the very locality I have pointed out. They were the fac simile of cases occurring more or less frequently every year; they were malignant, and they were fatal; but they offered not the slightest resemblance to Yellow fever. The fever was high, the pulse was accelerated up to 120 to 140 in the minute; while the skin was hot to the touch, it was covered at times with moisture, standing out in great beads of sweat. The brain was affected with stupor from the very commencement. When the fever remitted, which it did in the morning, and notably on the morning of the alternate day, the brain would become relieved in a measure, but as the fever exacerbated it would again become op-



pressed. These cases terminated in a stupor many hours before death. Perspiration in the very height of the fever, I consider as a very common symptom of the congestive form of Bilious fever, and I always consider those cases most dangerous which show this symptom, while there are stupor, an accelerated pulse, and an intensely hot skin. Whilst the cases which terminated favorably have the paroxysm of fever resolved by a critical sweat, with an abatement or cessation of the other febrile symptoms; I have time and again seen a man *in articulo mortis*, with a pulse so accelerated that it could not well be timed; in a profound stupor, and with the sweat standing out on his skin in great drops; and this condition of affairs had not supervened just before the patient became in *extremis*, but had gradually come on in the last exacerbation of fever. There are other cases which come under the category of pernicious or malignant intermittents, or congestive chills. I have known a patient in a state of perfect apyrexia in the morning, to die in the afternoon. These are the most malignant forms of climate fever met with in this city. I may fail to convey an idea of their real character, but it is from want of power in my pen, not from want of their total dissimilarity to Yellow fever.

Late last fall, but before a frost, a watchman on the Charleston wharf, at the northwestern portion of the city, was found early in the morning lying in a state of complete insensibility. The night had been a stormy one; he had had intermittent fever, but had persisted in going to his work in spite of the remonstrances of his wife. He was carried to his house on the brow of the bluff, and I was sent for. I found him in a complete stupor, with his pulse nearly gone, his extremities icy cold, his whole periphery cool, skin mottled, purplish, or rather in some parts bluish, with a clammy sweat, hurried respiration, and in short, in what I considered a dying condition. I had him stripped and rubbed dry, had dry heat applied to the surface, sinapisms to every available point, and a large blister to the epigastrium and one to each leg. Friction was applied continuously for some hours; after awhile he was enabled to swallow: I gave him hot brandy toddy every half hour, and calomel two grains, and opium one-sixth every two hours. Reaction gradually took place and the next day, about twenty-four hours after he had been brought home, he spoke. From that time he began to mend, and is now at this present writing "earning his bread by the sweat of his brow."

The rationale of this case is simple. The exposure to cold and moisture in an undue degree, converted what would have been, without such exposure, a mild paroxysm of simple intermittent into a malignant congestive chill, oppressing and depressing all the vital powers so as to prevent proper reaction, thus giving a fair representation of the congestive form of Bilious fever. If it were not so, I am at a loss to comprehend what that type of fever is, and must come down from the witness stand as never having seen a genuine case of it. One more prominent symptom remains to be noticed. While a jaundiced hue often follows an attack of bilious fever, another colour is its most frequent concomitant. There is in the worst types of it, a peculiar pallid anemic hue. This hue can be seen in those cases which have not fully recovered from attacks of intermittent fever, or where, as is often the case, a severe attack of bilious remittent fever has been succeeded by attacks of irregular intermittent fever prolonged late in the fall or even after a frost.

In my clinical lectures at the Savannah Hospital, I have frequently diagnosticated malarial fever subjects from merely seeing them, before, I had asked a single question of the patient. In enumerating the peculiar signs of Yellow fever, I did not speak of the yellow colour of the skin because I wished to reserve that point up to this period. Now, as a *general rule*, fatal cases of that disease presented that discoloration; and an unfavorable prognosis was almost always to be formed when the skin began to assume that colour; yet in the commencement of the epidemic, during our intensely hot and dry weather, when the cases were more acute and terminated more rapidly, I saw many dead bodies whose skin could not have afforded any index to the disease of which they had died, although black vomit had been freely thrown up before death. Of the cases which did recover, although many had been very severe, very few presented any morbid discoloration of the skin, and it was a subject of frequent remark by those who returned to us after the pestilence had left us, that they were astonished to see the survivors looking so well and free from any marks of previous diseases. A gentleman, his wife and child, had all had very severe attacks of the fever in September 1854. He visited the north late in October for a change. He has often told me that persons there would hardly believe that they had just come from what was then an infected city, and that they had been

sufferers from the scourge, so little did they bear any traces of it with them. Let me then sum up what are the prominent symptoms during life of each disease, before I go into the signs presented after death. I speak of the average of symptoms without noticing the varieties which occur in this, as in every other disease. In Yellow fever, the access of the disease is generally sudden; a person may be about in the morning and quite ill in the evening, or may be well in the evening and attending to business and be prostrated in the morning following. The sympathetic pains are much greater; the pain is over frontal region, over sacrum and down the thighs; the skin is hot and dry, and does not pour out perspiration as in Bilious fever; the pulse, never mind how high the febrile symptoms, seldom ranges over a hundred; the tongue is not coated, on the contrary offers no index of the state of the stomach. The paroxysm of fever subsides without any critical evacuation and a state of calm succeeds which lasts from a few hours to forty eight hours. The pulse at this stage generally falls as low as fifty or sixty. In bad cases, the stomach invariably shows great tenderness upon pressure, or there is an uneasy sensation in the epigastrium, and an intolerance of food. With this, there is also a remarkable prostration of strength. Many cases seem to be threatened with death from sheer exhaustion; nor is this at all dependent on any previous evacuations from the system, nor is it always in a direct ratio to the severity of the febrile paroxysm, for it would occur where there had been no evacuation, and would follow a very slight paroxysm. If the case continued to grow worse, the retching is followed by the vomiting of the black vomit, the occurrence of which at the season of the year when alone Yellow fever prevails in this climate, leaves no doubt as to the nature of the disease or the fate of the case; or hemorrhage would occur from the mouth, the lips, the tongue, the gums, a scorbutic oozing. In an epidemic of Bilious fever, many of the cases have their periodicity so well marked that no one could doubt as to their true nature. Other cases have their remissions more obscurely marked, and without close watching, would seem to be continued fever, but a close observation will generally detect marked remissions, and decided exacerbations. The remissions almost always occur in the forenoon, the exacerbation in the latter part of the day and at night. Bilious fever seldom attains its height at one bound as does Yellow fever. Questioning will frequently



reveal the fact that there has been a distinct intermission between the first and second paroxysm. The pulse is most certainly more accelerated in Bilious fever, reaching often in a paroxysm up to 120 to 140. It will also vary many beats in the course of the day. A paroxysm seldom lasts longer than twenty-four hours when it either terminates, or there is a marked remission accompanied by sweats more or less profuse, and a sensible abatement of all the febrile symptoms. After this the fever again rises, again runs the same round. If the case is to terminate favorably, the paroxysms become lighter and lighter, the remissions more marked; very frequently they may be considered perfect intermissions, and you will see that the great peculiarity of Bilious fever is its *periodicity*. In the paroxysms there are headache, and backache, and pain down the sciatic nerve, but they are not so marked, as a general rule; not of such a neuralgic character as is so often seen in Yellow fever. There are nausea and vomiting, but bile continues to be thrown up to the last stage of Bilious fever, should it be a case marked by great irritability of the stomach. Now when a person is attacked by Yellow fever, of course there is some bile in the system, and it may sometimes be thrown up at the very commencement of the attack, but certainly it is never seen in the advanced stages of the disease.

In October 1842, I published the article on Black Vomit in the American Journal of the Medical Sciences alluded to before. My experience was then limited, but I adhere without qualification to the opinion then announced by me, viz: "Perhaps there may be bile in the incipency of the attack, before a physician is called, but in every case that has ever come under my notice, that has terminated in black vomit, *the absence of bile in the excretions has been the distinctive characteristic of the disease.*" The head is decidedly more affected in Bilious fever, than in Yellow fever. It is a common thing for patients to remain in their senses long after they have reached the stage of black vomit. Just before death, the brain gives way as the other organs do. But in a bad case of Bilious fever there is almost always oppression of the brain, and cases lie in a stupor for two or three days before death. I think the anatomical lesions discovered in Bilious fever after death, which, I will detail further on, sufficiently account for this.

I think I have furnished sufficient points of contrast for the

symptoms during life. Let us follow out the diseases, and see what anatomical lesions are left on the dead body by them.

In Bilious fever we find marks of disease on the mucous coat of the stomach, the upper part of the duodenum and the liver. These I may state as invariable. In a large number of cases, and particularly in the worst types of Bilious fever, there are traces of the disease on and under the meninges of the brain.

In Yellow fever we find the same organs affected, except that, as the brain is involved during life in but comparatively few cases, it does not exhibit the same uniform alteration as do the stomach and liver. Now here is a point of relation, and to what does it amount?—to no more than does the relation of scarlet fever to measles, in each of which the skin and air passages are affected. In Bilious fever we find what I consider undoubted marks of an inflamed stomach.

The mucous membrane is often red and injected, either punctated or arborescent, it is often softened, so as it can be easily scraped off with the handle of the scalpel; it is very often of a slate colour in protracted cases, but *invariably* traces of bile can be detected in the stomach or in the intestines. In Yellow fever, we also find the mucous membrane injected, but certainly much more generally and much more intensely than in Bilious fever. You do not always find black vomit in the stomach, because it may have been ejected just before death, but most generally you will. I have opened, in my day, several subjects dead from Yellow fever, in whose stomach black vomit was found, although not a particle had been thrown up. The patient, from Augusta, who entered the hospital in 1839, alluded to before, was one of these cases. Without a post-mortem examination, it might have remained in doubt as to what his fever was. Another case, amongst the very last of 1854, was examined after death by Dr. J. B. Read and myself, and black vomit was found in the stomach, although none had been ejected during life.

Black vomit is however generally found in the stomach; but it is found free in almost all instances, lying on the surface of the mucous membrane; but there are cases in which the peculiar flocculi of black vomit can be detected in the very mouths of the patulous vessels of the mucous membrane; and in some cases, I have seen a dark black arborescent injection running under or in the mucous membrane, exactly like the red arborescent injection so

frequently met with. Now black vomit is a hemorrhage. I expressed in 1842, (loc. cit.) my belief, that it was blood altered; in 1852, I detected blood corpuscles existing in it; I exhibited them under the microscope to Dr. Wragg, Dr. West, Dr. Read, Dr. Bulloch, and the late Dr. Ladd. Here is proof positive that the mucous membrane is the seat of a peculiar hemorrhage. Dr. Copland has some grounds in wishing to designate Yellow fever as the hæmagastic pestilence. Whatever may be the real poison, it undoubtedly has a peculiar tendency to produce hemorrhage from the stomach; but there is a great deal of acid in the stomach, and it produces a peculiar effect on the blood, coagulating it into the flocculi of black vomit. The ejecta in Yellow fever, tested by litmus paper, always show strong acidity; it is the acid which turns the blood, and prevents the hæmorrhage from being a mere hematemesis. Occasionally the hemorrhagic tendency of the disease is shown by its action on the bowels, and blood is passed downwards. Such cases, as far as my experience goes, are always fatal, are genuine Yellow fever; but must be distinguished from those in which the black vomit is passed per anum; in the latter case, recovery is more apt to follow than when the unaltered blood is passed. Now, if Yellow fever were but the highest grade of Bilious fever, we ought every season to meet with occasional cases in which black vomit would be found in the stomach after death, even if it were not ejected during life. Such cases have never occurred in my experience. But it is when we examine the liver that we find unmistakable evidences of the peculiar nature of Yellow fever. In Bilious fever we find the liver of various shades, dark brown, umber, bronze, but always gorged with blood. In Yellow fever it is always altered in colour, being pale and destitute of blood. The best colour to which I can compare it is boxwood. Some boxwood is of a dirty yellow, some of a brighter yellow; so of the liver, some are of a light pale boxwood, almost a dirty ash white, some of a more pronounced yellow color. In a Bilious fever liver, by pressing a piece of white paper on the cut acini, you will stain it yellow, showing the secretion of bile still having existed up to the time of death; but this cannot be done with a Yellow fever liver. It sometimes contains a thin bloody serum, most generally it is almost dry. In 1827, Dr. Waring pointed out to me this state of the liver as the exact state presented in our fatal epidemic of 1820. In every case that I have had



the opportunity of examining from that time to the present, I have found the identical appearances. I examined cases at all times of our epidemic of 1854, and I found no variation of any account. I consider this conclusive proof of the identity of the disease, from 1820 to 1854.

One case early in the season, presented a mottled liver, that is, there were spots in it which had undergone the peculiar change incident to Yellow fever, and there were other spots in which the liver presented the natural Spanish brown color. I attribute this to the patient having died before the change in the circulating fluids had been sufficiently great to effect the alteration of the entire parenchyma. In some cases of Yellow fever, I have seen the gall bladder contain only a dirty, thick, viscid bile. In Bilious fever, it is always filled with bile.

In Yellow fever, the absence of bile is not confined to the stomach: you may search from the cardiac orifice to the anus without finding a trace of it; often have I done so, and never have I succeeded. I do not say, that a person who has the opportunity of examining *every* fatal case which may occur in a large hospital may not succeed better, but when a man is harrassed with constant demands on his time, as a physician in full private practice will be in great epidemics, he cannot examine every case. It was my object in 1854, to procure a record of the post-mortem appearances during the various periods of the epidemic, and I examined cases which died in August, September, October, and November, and I found a great uniformity in all of them—the discolored liver and the total absence of biliary secretion in the primæ viæ.

I was the attending physician of the Savannah Hospital for every summer, from that of 1835 to that of 1849, inclusive. I rarely allowed a fatal case of Bilious fever to escape without an autopsy. I state most distinctly, that in every case I found an abundance of bile in the intestines, if I did not find it in the stomach.

My examinations of the head in Yellow fever have been very few. In the great majority of cases, the cerebral symptoms did not induce me to do so. I have seen cases in which the head was involved from the commencement, and, doubtless, those cases would have furnished evidences of cerebral engorgement; but, as a general rule, the local manifestations of Yellow fever are in the stomach and liver. The existence of long continued stupor in Bilious fever made me examine the brain very frequently; indeed,

in the great majority of cases, and as I stated before, enough was found to account satisfactorily for the stupor;—serum was generally effused under the coverings of the brain, in the ventricles, and under the arachnoid, and the latter membrane was frequently opalescent. I have always considered the brain as a special organ for the local manifestation of Bilious fever, both from the decided symptoms presented during life, and from the post-mortem appearances.

I present for the inspection of the Society, drawings in oil colors taken from nature, of the appearances of the liver in the two diseases. An inspection will be better than any description. The Society cannot fail to see, at a glance, the vast difference from the brown and bronze of the four copies of the Bilious fever livers, and the light yellow boxwood color of the Yellow fever liver. It has been my object to sketch the prominent characteristics of the two diseases, presented during life and after death. If they be so widely and so uniformly different, how can we class them as the same disease, modified only by intensity?

The second opinion entertained, that Yellow fever is a disease, *sui generis*, special, distinct, has been sufficiently discussed in the consideration devoted to the opinion, whether it is only a higher grade of Bilious fever. It will be seen that I entertain this belief.

The question of its origin and propagation would, itself, afford scope for an essay; and mine has already occupied so much time, that I could not go into it now. I can bear my decided testimony that in no instance has there ever been the shadow of the shade of proof, that it ever was imported into Savannah from abroad. On the contrary, the proof is positive that its first victims had had no communication, direct or indirect, with any source of infection. Moreover, when the British steamer Conway, which ran to the West-Indies, touched at this port, I attended two cases of Yellow fever from her, both of which died in the city, and yet no disease was propagated from them. In March, 1841, (as will be seen by my article quoted before,) I brought a case from a ship from Demerara, and placed it in the hospital where the patient died. It is said that it can be propagated from abroad in a city, although most give up the point as to its contagion in the country. The whole experience of 1820 and 1854, when our citizens fled by hundreds into the country, and into neighboring villages, towns, and cities, does not afford a single instance where the disease was

spread by the fugitives. If then, it is not propagated into the country, and into other cities by land routes, why is it supposed to be so fatal when it comes by sea? If one case can originate in a place, why not ten or twenty? Case upon case occurred in 1854, in which the patients had not been near a deceased subject. Isolation was no protection. The poison, whatever it may be, spread like a pall over the whole city, and covered in its embrace all who staid, or entered its precincts; but a quarter of a mile beyond its limits the poison became innocuous. Such is fact. Let those who appeal to fancy, disprove it, or theorise upon it.

Again: facts prove that Yellow fever is a city disease. Exposure to swamp malaria, staying on a rice plantation in the summer, and in the fall before a frost, will produce a malignant and most fatal Congestive-bilious fever; but *never*, no *never* Yellow fever. Such cases of Bilious fever, as I stated before, I meet with every year; but, thank God, very seldom have I encountered cases of Yellow fever.

Yellow fever, in this locality, has this in common with Bilious fever, it never prevails except in the summer and fall months, and is most effectually cut short by a frost. As a general epidemic, it ceased to prevail in Savannah about the second week in October in 1854; yet the poison continued in the atmosphere until a frost, and attacked those strangers who imprudently returned into the city. The last resident whom I attended was attacked on the 25th of October. The cases which occurred afterwards were, without exception, strangers and unacclimated.

Since my connexion with the Savannah Medical College, I again attend the hospital, and it was there, and amongst seamen that I met with my last cases. They lay promiscuously amongst patients with other diseases, but in no single instance did any body catch the disease. I stated towards the close of that ever memorable season, that I would expect to meet with Yellow fever for a fortnight after a frost. I had taken up the belief that ten days, or a fortnight, was the period of incubation of the poison. My last case died at the hospital on the 27th of November; frost had occurred on the 13th of that month. The unfortunate subject had reached our city before the mighty destroyer of the poison had withered and destroyed its noxious powers.

Such, gentlemen, is my *experience* of the relation of Yellow and Bilious fever.

SAVANNAH, April, 1856.



## ARTICLE XXIV.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

## LETTER NO. 14.

MONTGOMERY, ALA., July 22nd, 1856.

*Messrs. Editors*—Having expressed the belief, that the liver is primarily affected, and largely concerned in the production of these fevers, (*intermittents and remittents*,) it is but proper that I should give some of the reasons which induce that belief.

The liver is a large central organ, having more intimate and extensive anatomical relations with other important organs and systems, and a greater number of offices and functions to perform, than any other organ in the body. It receives the blood from other organs, which is distributed through its substance, from which the bile is secreted; it receives and elaborates a large portion of nutritious matter furnished by the process of digestion, to which the bile largely contributes; it prepares the carbonaceous products for more easy and rapid combustion in the lungs, and thus aids in the production and evolution of animal heat; it eliminates the impure and effete matters from the blood which it receives, and thus *acts* the *part* of one of the principal depurating organs of the system. The liver, being an excitable organ, is liable to frequent interruptions in the performance of its functions, by causes which tend to *increase* or *diminish* its activity, either of which results must be felt in a greater or less degree throughout the system, but more particularly by those organs in immediate connection with, and dependent upon it. To say nothing of other causes, the stimulant effects of atmospheric heat (which, by-the-by, is essential to the production of these fevers) upon the liver, which it highly excites, often causes an increased, and sometimes very excessive, secretion of bile; and the bile thus secreted is generally imperfectly formed and depraved in its character, and in place of subserving its natural purposes, it acts as an irritant to the stomach and intestines, giving rise to bilious vomiting and purging, (than which nothing more rapidly prostrates the nervous or vital powers,) suspends the function of digestion, interrupts the process of elimination, and depuration, and, in a word, suspends or deranges *all* its functions, as well as those of dependent organs. But if these effects follow excessive action, from over excitement, let

us see some of those which result from deficient action, from depression. The non-secretion of bile, which is essential to the digestive process—the non-elaboration of the materials of nutrition—the non-elimination of the impure and noxious substances from the blood, and all the consequences which grow out of these suspended functions, to say nothing of the effects resulting from bilious and sanguineous congestion of the organ, are the legitimate and natural results of torpor and acidity of the liver.

The question then arises—what cause is most likely to produce this condition of the liver? Without calling in the aid of other causes, which no doubt exert an influence in the production of these fevers—malaria, for instance—which may have the effect of increasing the bile matter in the blood, and thus increasing work for the liver, or which may have the effect of impairing the process of digestion and nutrition, thus impoverishing the blood and rendering it more difficult of depuration, we can find a cause (and the *true* one in my opinion) for this condition of the liver, in the *loss of excitability* from *over action*, consequent upon long continued and high ranges of atmospheric heat. While atmospheric heat is thus employed in the *production* of these fevers, at least so far as the *liver* is concerned, it exerts a large influence in determining their *general character*, with respect to the *degrees* of excitement, as it tends in the same manner to impair the tone and vigour of the whole nervous system, as it does the liver. When the febrile or reactionary movement commences in these fevers, in the manner which has been indicated, by the redistribution of the accumulated excitability to the organs whence it was derived in the formation of the cold stage, or stage of nervous depression, it will proceed with a rapidity, and progress, to an extent or degree of excitement proportioned *always* to the condition of the general system, in respect to the amount of vigour and excitability which it possesses, as determined by the operation of the *individual* and *general predisposing causes*, and by the presence, or not, of epidemic influences—thus giving rise to the modifications which these fevers assume with respect to the degrees of excitement, which I have attempted, accordingly, to classify. So far, then, as the febrile movement, and the essential type and character of these fevers are concerned, it matters not whether the excitability of the system is *plus*, or *minus*, or whether the excitement rises *above*, or falls *below* the line of a healthy excitement. If the system possess vigour

and tonicity, the depression will generally be slight and of short duration, and the reaction will be prompt, rapid and complete. If the system possess less vigour, and more elasticity and mobility, the reaction may be rapid, but will be *less* certain, complete, or permanent; and if the system is enfeebled and depressed, the reaction will be proportionately slow, feeble and imperfect, or incomplete—thus furnishing us with the *inflammatory*, the *irritant*, and the *congestive* forms or grades of *these fevers*, with such intermediate grades or degrees as have already been noticed.

Before I attempt an explanation of the pathological condition of the principal organs, as they exist in the second or febrile stage of these fevers, it is proper that I should first notice the condition of the skin, and the remote systematic capillaries, as they not only play an important part in the production of these opposite conditions of the system, but furnish the most prominent signs of the actual condition with respect to the *degrees* of excitement or depression. I have stated that in the formation of the *cold stage*, these vessels became deprived of their accustomed or proportionate share of excitability, and in consequence became *relaxed*, allowing of the free escape of the blood sent to them by the heart, which continues its action *to some extent independent* of the general loss of excitability; and the flow of blood being retarded in the pulmonary extremity, from a feeble respiratory movement, necessarily accumulates upon the right side of the heart, including the pulmonary artery and its ramifications. While this state of congestion gives rise to plethora, or engorgement in the *organic capillaries*, in the manner which has been described, the *remote capillaries* remain *free* from such engorgement, except in very extreme cases of depression, as in collapse and asphyxia, and this is owing to the valvular structure of the veins, and the remoteness of their radicles in the extremities from the *seat* of congestion, which has been shown to be in the lungs and heart, (congestion of the liver having no agency, so far as the remote capillaries are concerned). The cold, flaccid and shrunken condition of the skin and extremities, and the feeble action of the heart, indicate the feebleness of the respiratory movement, and the sluggishness of the pulmonary circulation, which is sometimes so great, that not only do the extremities become cold, but the whole surface of the body, and even the tongue and breath become so. This condition may exist in various degrees, from the slightest chill perceptible, to a complete



collapse, depending of course upon the degrees of nervous depression; and so may the febrile or hot stage vary in degrees of excitement, from a simple flush to the most intense febrile action. Now, as it is our duty to enquire *what* takes place in these conditions, it is equally our duty to enquire into their why and wherefore. It would seem, then, that the two extremities of the circulation were mainly employed in the formation of the cold and hot stages of intermittent and remittent fevers; that while nervous depression retards the flow of blood through the pulmonary extremity, the same cause, by relaxing, allows it to flow readily and freely through the remote capillaries, and the natural consequence must be an accumulation of blood on the right side of the circulation, as it exists in the cold, or congestive stage, and which must continue to exist, with the attendant phenomena, as long as the depression continues; and that, while excitement accelerates the flow of blood through the pulmonary extremity, it retards it in the remote capillaries, and the accumulation necessarily takes place on the left side of the circulation, as it exists in the hot or febrile stage. It is true, that the circulation of the blood depends upon the action of the heart, but the heart has not as much *agency* in the *production* of these conditions as we might be disposed to believe from first sight. The retardation of the blood in the lungs cannot be charged to a want of action in the heart, for *in fact*, the blood is thrown in excess upon the pulmonary capillaries by the heart's action: nor is the emptiness of the remote capillaries, in the cold stage, to be laid to the feeble action of the heart, as we see that the action of the heart is always sufficient to empty the arteries. With this explanation of the manner in which the cold stage of an intermittent is formed, from a want of *nervous power* and action in the two capillary extremities of the circulation, in consequence of its accumulation in the *liver*, or other weak and laboring organ, which I have shown to be the first step or link, in the chain of morbid actions which follows, with the blood accumulated upon the right side of the circulation, with its attendant consequences and its phenomena, I will proceed to examine the consequences of a *return* or *restoration* of nervous power to the capillaries of the two extremities, being the commencement of the reactionary or febrile movement.

Upon an increase of the respiratory movement, and a freer flow of blood through the pulmonary extremity, the heart, in conse-

quence of an increased supply of blood, which has been revived in its passage through the lungs, becomes increased in action and sends the blood out to all parts, as fast as it is received from the lungs. If the heart failed in this, and was not responsive to the stimulus of the fresh arterial blood, an increased flow of blood through the pulmonary capillaries would necessarily produce congestion in the *pulmonary veins*—a thing, I dare say, which rarely occurs. So far, the action of the heart is instrumental in carrying on the febrile movement, though not instrumental in starting it. The next event in the regular sequence is an increase of the general excitement, from the stimulus of the blood upon the nervous centres, and an increase in the activity or power of action, in all parts which share in the general excitement. If the remote or systematic capillaries receive their full share of excitement, and regain their contractile power, they will be enabled to retain their blood sufficiently long for the arteries to become refilled, which will be the sooner, in proportion to the flow of blood through the pulmonary extremity of the circulation. In this condition of things, we have a full development of the febrile stage, with all the phenomena dependent upon it, such as a hot, dry skin—full, strong pulse, &c., &c. But this prompt reaction, and high excitement, presupposes or indicates a full share of vigour and excitability in the system, which does not always exist in our latitude.

From the influence of causes, which have been sufficiently pointed out, it is generally the case in our climate that owing to *less vigour*, and *greater elasticity and mobility of the system*, independent of the *immediate* depressing influences which would retard reaction, notwithstanding there may be a free flow of blood through the pulmonary extremity, duly exciting the heart to action, and the nervous centres respond to the stimulant influence of the blood, promising a full and uniform, or perfect, reaction, the *unequal distribution* of nervous excitement is almost always certain to prevent it. Thus, if the remote capillaries fail to receive their due share of the nervous power, or excitability in its re-distribution, or of the new excitement kindled up by the reaction, through the nervous centres, the consequence will be that they will allow the blood to pass so rapidly out of them as to prevent the perfect filling up of the arteries, which is the case in the irritable forms of these fevers, and which are characterized by a hot, but generally moist skin, and a *frequent* pulse—the action of the

heart being spent in frequency of action on account of a diminished column of arterial blood, the nervous centres, in such cases, being often the seat of accumulated excitement, giving rise to delirium, convulsions, &c. A greater degree of depression, or less of reactionary power, with loss of tone and contractility in the systemic or remote capillaries, generally determines the grade of these fevers, which will be known by the feebleness of and frequency of the pulse, and the coldness and flaccidity of the skin, during the reactionary or febrile stage of the disease, or paroxysm. In all the grades of these fevers below the *irritant*, the febrile excitement, though generally manifest, never rises so high as to create or establish a general arterial plethora, or a preponderance of the blood upon the left side of the circulation, except in organs which have been engorged by previous congestion, as the brain, stomach, liver, &c., in the manner which has been described, or in such parts as may become the point of accumulated excitability, giving rise to irritation or inflammation, which conditions are usually manifested by increased heat of the head and body, while the extremities remain cold, or preternaturally cool during the paroxysm, indicating a want of tone or power of action in the remote capillaries.

Having given what I conceive to be the "rationale," or the physiological and pathological process by which the *cold* and *hot* stages of intermittent and remittent fevers are produced, which, so far as the *two extremities* of the general circulation are concerned, is applicable to the production of every other form, grade, or type of fever, whether the attack be preceded by depression and congestion, or whether (if such a thing be possible,) the system rise into a state of general febrile excitement without it, I feel it due to myself in order to prevent misunderstanding, to repeat, that the *capillaries* of the *pulmonary extremity* of the general circulation, under the influence of *general nervous depression*, fails to *transmit* the blood through them *as fast* as it is sent to them by the heart, and consequently the blood accumulates behind them; and that the *remote capillaries*, under the same influence, transmit the blood *faster* through them (except where it is opposed by physical obstruction,) than it is sent to them by the heart; and that a *reversed* condition and result occurs when these vessels are under the influence of *general nervous excitement*,—the heart in the meantime performing its part in the circulation of the blood, *but not*



*controlling the action of the capillaries.\** It may be asked, why resort to a local origin, and to the doctrine of accumulated excitability for the production of the cold stage, and its diffusion or redistribution for the production of the hot stage of these fevers, when an easier and shorter way would have been to assign their production at once, to the direct influence of the causes of depression and excitement upon these vessels? In my opinion, I have given the true method of their production. In my last letter, I stated that a condition of general depression and congestion could be produced from a sudden and violent shock to the great nervous centres; and so may a high state of general excitement be produced from some powerful cause, but in each case they would be but ephemeral and transitory, while in these fevers these conditions are permanent, or of frequent occurrence according to their type, form, or modification.

The importance of these *points* of pathology, respecting the *degrees* of *nervous excitement*, and the consequent *unequal* and *irregular distribution of the blood*, involving, as they do, the most serious consequences, attendant upon these and, indeed, all other fevers, is my apology for dwelling upon them with so much earnestness and pertinacity; for I candidly believe, that if they were looked to more

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\* I would not question the fact that the circulation in the capillaries is *assisted*, as has been maintained by the influence of *affinities*, that is, that the arterial blood in exchanging oxygen for carbon in the remote or systemic capillaries produces a *forward* movement, and that a deficiency of oxygen in the blood, has the effect to retard its movement in the remote capillaries, while in the pulmonary extremity the affinity of venous or carbonized blood for oxygen produces the same result, and that an excess of carbon retards it in the pulmonary capillaries. But this doctrine does not serve to account for the *broken balance* which sometimes suddenly takes place in the formation of the cold and hot stages of the fevers in question, and certainly does not serve to explain the causes of their production, if we leave out of view the condition of the capillaries, with respect to the degrees of nervous excitement and depression, upon which I maintain these disturbances in the circulation mainly depend. And if we attempt to explain the production of these phenomena, according to the doctrine of affinity, we will find that the condition of the capillaries have no agency in their production, but that they depend upon the *condition of the blood* with respect to its amount of carbon and oxygen; and, we will be compelled to look further for the causes which produce that *condition*, which will be found as I have maintained, in *defective and imperfect aeration* from an *enfeebled* respiratory movement, whereby the quantity of oxygen is diminished; or from defective and imperfect depuration from suspended functions of the liver, whereby the quantity of carbon is increased in the blood, which after all are but the effects or results of *deficient nervous excitability*.

closely by the profession at large, our *cardinal remedies* would receive the credit of their true "behest," and these diseases would be treated with more uniformity and success than they generally have been. It is not in the spirit of arrogance, but of self-gratulation, (which, by-the-by, is about *my only reward*.) that I say, that the principles which I am endeavoring to advocate have carried me through a practice of nearly thirty years, with, perhaps, as few disappointments, or causes of regret, as the most favoured of my cotemporaries. It is not very delicate, I know, for a professional man to blazon his success, even in the ears of his colleagues; but, as an argument in support of this principle which I advocate, I will state that, in the management of certain formidable diseases, scarlet fever, for instance, though I have encountered it in all its forms and varieties, through several epidemics, besides many individual or sporadic cases, I have had the good fortune never to lose a case. It is but justice, however, to myself and the profession, to say, that I have pursued no plan, and used no remedies, which are not recognized and prescribed by the best authors, with this exception, that viewing the disease as self-limiting, having a definite course to run, according to its essential and specific nature, I have generally avoided as much medication as the *books* prescribe, but have left it to its course, *watching*, however, for *such* symptoms as did not belong to it in its essential character, and treating *such* upon the general principles which I am now advocating, to which, *next to peculiar good fortune*, I must ascribe my success.

In the management of yellow fever my success has been little less than in scarlet fever; and so of typhoid fever, and various forms of congestive diseases, the details of which will hereafter be given—among others, a *severe epidemic congestive pneumonia*, over sixty cases of which I treated one season, without the loss of a patient. It is not my privilege to say as much of some other epidemics which I have encountered, such as *cholera*, and *cerebro-spinal meningitis*. But in these, the want of equal success depended rather upon the *want* of a *timely* and *proper* application of the principles of which I speak, than from error or defect in the principles themselves, as, after all, I have not been able to ascertain that *any other* plan of treatment was more successful. I am not so vain and arrogant as to suppose that *all* cases of those malignant diseases which I have named are amenable to treatment, and that a great many of them would not terminate fatally under any known plan or system of

treatment; but I do say, that hundreds and thousands of cases terminate fatally, which under a *timely* and *proper* course of treatment would recover; and that in all such cases, where the physician has been called *in time*, the responsibility is upon him, and he cannot, upon the plea of their malignancy, or the impotency of the remedies at his command, evade, or shrink from it. Nor should he be too ready to claim the honor of success, as there are hundreds and thousands of cases which would recover without his aid or assistance. Such, no doubt, was the case with the largest number of the cases of scarlatina and typhoid fever which have fallen into my hands, which ("an honest confession being good for the soul") I am willing to confess, though I could not say so much with respect to the other diseases named.

Upon a redistribution of nervous power, or excitability, those organs will receive the largest share, whose capillary vessels have been the seat of engorgement from venous congestion. These have been shown to be, the brain, stomach and intestines—the liver and spleen; and these, in consequence of irritation thus kindled up in them, become the points of determination and accumulation of blood, as it finds its way, more or less rapidly, through the pulmonary extremity of the circulation. From the direct action of the causes of irritation, the capillaries of these and other organs may become the seat of engorgement, (which may or may not excite a febrile movement in the system,) which is the antecedent condition to inflammation in these organs. Thus, we see that the capillaries of these organs are *doubly liable* to engorgement, and, *liable to double* engorgement; for, if the reactionary powers of the system are insufficient to effect a full and complete reaction, and entirely remove the congestion, which is generally the case in our worse forms of fever, these organs, especially those which are connected with, and are dependent upon, the liver, (which often remains in a state of congestion after the lungs have been set free,) must necessarily remain to a greater or less extent, in a state of engorgement, to be increased from an increase of blood thrown upon them in consequence of the febrile reaction; and whether the reaction be partial or complete, these organs will always claim, and will generally receive, more than their full share of the circulating fluid. Hence it is that so many of these fevers are characterised during the febrile stage or exacerbation, by heat of the body and head, but preternatural, cool extremities, with a variable, but generally a feeble or frequent



pulse; and this is the class of fevers which I have designated as congesto-inflammatory and congesto-irritant. Should there exist a greater amount of excitability in the system, with an active pulmonary circulation, the degrees of animal heat will be proportionably exalted, and the action of the heart increased, giving great celerity to the blood which is in active circulation, and diffusing heat throughout the system. In this form of fever, which we recognize as the *irritant*, and by far the most common in young subjects—notwithstanding the reaction is often violent, as evinced by the increased action of the heart, and the great increase of heat which extends to the whole surface and the extremities—the reaction is never complete or permanent, for the reason that the enfeebled and relaxed condition of the remote capillaries permits such a free escape of the blood, that the arteries fail to be filled up, in consequence of which the pulse never requires much strength, but is always frequent, and the skin, though hot, is generally moist, a state of things peculiarly characteristic of this form of fever. Now, while the remote capillaries participate for a short time, and to a limited extent, in the general febrile excitement, the organic capillaries always come in for their full share, if not more, as evinced by the delirium and convulsions, and the copious bilious vomiting and purging which are almost the constant attendants upon the exacerbations of this form of fever, *abundant secretion* being one of the diagnostics between this and the *inflammatory* form. The irritation excited in the brain by the stimulus of highly oxygenized blood, consequent upon the active pulmonary circulation, constitutes a new and altogether different morbid action from that which existed in consequence of mere physical obstruction and engorgement of its capillaries from congestion in the lungs, manifested by a change of the dull, inactive and comatose state of the brain into a state of delirium, or phrenzy, and convulsions. This condition is sometimes the result of sympathetic action, in which case, though the manifestation may be nearly the same, the irritation will be more transitory and evanescent, and seldom passes into a higher or *inflammatory* grade of action, which a long-continued or frequent renewal of the condition, from the recurrence of paroxysms, is apt to do.

Another source of disturbance in the functions of the brain, and other nervous centres, is to be found in the changed character and depraved condition of the blood; but cerebral disturbance from this cause seldom takes place in the early stages, or in the milder forms

of these fevers, and is only found in the protracted and violent cases, in which the excitement has been so high as to suspend for a length of time the functions of secretion and excretion, allowing of the accumulation of poisonous matters in the blood, which should have been thrown out by the liver and other depurating organs; and the blood thus depraved, being thrown upon the brain and other nervous centres, unlike the freshly oxygenized blood, instead of *excitement*, produces depression, with low delirium and coma, the characteristics of the typhoid condition. It seems to be scarcely necessary to say that the *inflammatory* form of these fevers is distinguished from the *irritant*, by the more equally diffused and permanent character of the excitement—by the greater strength and less frequency of the pulse—by the more uniform and often less intense heat—by the dryness of the skin, and the suspension of the secretion generally—by the more protracted febrile exacerbation, and generally by less cerebral disturbance in the earlier stages of the disease.

Notwithstanding the frequent occurrence, and the important consequences of disturbance in the functions of the brain and other nervous centres in these fevers, there are other organs not less frequently involved—the derangement of whose functions are no less important and serious in their consequences than those of the brain—these are the liver, stomach and intestines. The condition of the latter, in connection with congestion of the former, in the cold stage of these fevers, I have already considered, and as these organs are all subject to the same states of morbid action, and the same consequences and results, from exalted excitement, it will be unnecessary to notice them separately, and I shall therefore confine my remarks, chiefly, to the functional derangements of the liver. These fevers have generally been called *bilious*, but whether they are entitled to the appellation from an excess, or deficient secretion of bile would be a difficult matter to determine. A certain degree of excitement is necessary for the performance of the functions of secretion, and whether it is too high, or too low, it becomes alike suspended; hence we notice that in the cold stage of these fevers, and particularly in those more decidedly congestive in their character, the vomiting and purging, which is a common occurrence, consists in the discharge of a glaucous, mucus, or serous matter, having more or less acrimony, without any of the properties of bile. But upon the return of excitement, and the establishment of a febrile reaction, large quantities of bile are often poured out, giving rise to

violent and obstinate bilious vomiting and purging. This excited, and active secretory function of the liver, often occurs as an idiopathic affection, but when it occurs as one of the phenomena, or as a concomitant of these fevers, it is usually in connection with the milder and more simple forms of intermittents, attended with a lively reaction, or with the earlier stages of remittents having the irritant form or character, of which it may almost be said to constitute a characteristic feature. But in the more advanced stages of these fevers, and in those of higher grades of excitement, as well as those of a lower, the *suspension* of the biliary secretion is one of the most common occurrences, and constitutes one of the most serious difficulties with which we have to contend. It is important, therefore, to enquire into the causes, and then into the consequences, of the suppression or suspension of the secretion. We have stated that *over action* from excessive stimulus, induced debility and exhaustion in the nervous tissues and have ascribed to this condition of the liver, (a state of depression from excessive action from the stimulus of atmospheric heat,) the origin of these fevers, and have shown the consequences which resulted, not merely in the suspension of the biliary secretion, but the formation of a portal congestion, and the consequent obstruction and interruption of the functions of other organs, and the changes thereby effected in the constitution of the blood. Now it must be borne in mind that the liver is liable to congestion and engorgement from several different causes—one from congestion of the lungs, from local debility or depression in its vessels from excessive excitement—or arterial and capillary engorgement and engorgement of the biliary ducts. The first, results from the general causes of depression; the second, from general or local causes of depression in the capillaries of the portal veins; the third, from excitement and the stimulus of freshly oxygenized blood accumulated in the hepatic artery and its capillaries—manifesting the signs of *irritation*, and *perchance*, the signs of inflammation—but I must say, that in my whole practice, I never met with a case which I could recognize as inflammation of the liver; the fourth, engorgement of the biliary ducts and gall bladder, from the accumulation of bile consequent upon its previously abundant or excessive secretion, which, from its retention in these vessels, and having parted with its thinner portions, it often becomes black and inspissated. Hence, it is, that we often see harrassing vomiting, and purging of thin bilious matter of various color and consistence,



followed by the discharge of large quantities of black or deep green and consistent bilious matter, which is always hailed as the harbinger of safety to the patient, especially, if it has been the work of a *substantial* dose of calomel.

Being admonished that I am transcending the usual limits allotted to my letters, I must close for the present, and resume the subject in my next letter. Hoping that you will not *tire* from reading, before I do from writing about these things, I remain, as usual,

Your friend, &c.

SAML. D. HOLT.

*On Scarlatina, and its Relations to Rheumatism, Carditis, and Albuminuria.* By Dr. W. HUGHES WILLSHIRE, Assistant Physician to the Charing-Cross Hospital.

[The complications of scarlet fever are very numerous, and will be found amply treated of in works on the subject; but rheumatism is one of those which, though common, has been but very cursorily noticed, excepting within the last few years. In 1851, Betz, of Heilbronn, drew particular attention to it, and went so far as to hint at an essential relation between acute rheumatism in the child and scarlet fever.]

He implies, at least, that an arthritic affection in young children often could not be told from the exanthem in question. That he had seen albuminuria and desquamation of the skin in acute rheumatism in children who had shown no exanthematous eruption; and, on the other hand, that the eruption was not an *essential* symptom of scarlet fever, leaving it, therefore, a very difficult, if not impossible, case in which to arrive at a differential diagnosis. In 1853, M. Trousseau stated that he had very frequently met with the complication we are speaking of; that the arthritic disorder sometimes, though but rarely, became generalised, and attained a high degree of intensity, accompanied by delirium and other nervous symptoms terminating in death. In 1854, I myself read a paper before the Medical Society in London on Rheumatism in Children, in which I adverted to its union with scarlatina (reported in 'The Lancet,' 1854, vol. i., p. 138); and a few months afterwards, Mr. Haydon, of Bovey Tracy, communicated some very interesting facts in 'The Lancet,' in reply to a commentary, as it were, upon my paper. You will find Mr. Haydon's communication in the first volume of that journal for last year. This gentleman has had some very corroborative experience, and states, that although he cannot coincide in the views I have detailed of Betz, he admits there is a remarkable analogy between the phenomena, especially the secondary ones of the two diseases; and that so closely does he consider the two related that he makes it a rule, on the decline of the rash in scarlet

fever, to administer lemon juice. I strongly advise you to read Mr. Haydon's remarks, and then to turn to Betz's paper, which you will find in the eighteenth volume of the 'Journal für Kinderkrankheiten.' In both essays you will find how easily certain cases of the two affections—I say certain cases, mind—might be confounded together.

If we were to take extreme forms of the two diseases—viz., on the one hand, an almost universally bright-red child, with sore throat, strawberry tongue, who had been known to have been with other children similarly affected, and on the other hand, a pallid, scrofulous child, without any cynanche, with a white-coated, moist tongue, and swollen and painful joints, there would certainly arise, I should say, no difficulty about the matter. But you must recollect scarlet fever is not always of this characteristic appearance; the sore-throat may be next to nothing, or absent; the rash only evident about the joints, which may be a little puffy and painful; the tongue but moderately and simply coated, and the child not known to have been directly exposed to the zymotic virus. On the other hand, if what is stated be true, albuminuria may be temporarily present in rheumatism, as also, according to Betz, desquamation of the cuticle. Now, in a case presenting such equivocal signs as I have hinted at as possible, I do not know that from these signs alone, and from these only, the differential diagnosis could be perfected. But this I must believe, from my own experience up to the present, that the further course of the malady, together with the commemorative history of the patient, would not fully help me out of the difficulty. The difficulty, in truth, has not yet occurred to me; but let me tell you that in India and in America a somewhat analogous one has happened to others, and from this, and what you will glean from Dr. Betz and Mr. Haydon, it is not impossible we might hereafter have a case occur amongst us, or an epidemic disorder, which should have such a mixture of the symptoms of rheumatism and scarlatina that we should be much puzzled to give it a satisfactory name.

A late patient of mine had been surrounded by the scarlatinal poison; she had sore-throat, diffused red efflorescence; the tongue and even breath were those of scarlet fever. The rash subsided, desquamation just began around the neck, when pains of the ankle and wrist joints came on; the parts were swollen and shining, and a kind of secondary fever was lighted up. Now, whatever might be thought of this latter affection, the former was clearly *not rheumatism*. That there is some obscurity about the exact nature of a disease occasionally attacking not only children, but adults, and marked by arthritic pain and tension often of a severe character, accompanied by a scarlet rash, is plain from the accounts given by some American and East and West India practitioners. For instance, in 1824, 1825, and 1847, outbreaks of a disease like the one I have just mentioned occurred in the East Indies. In the summer

of 1828, the malady appeared epidemically in some of the southern cities of the American Union, after having previously prevailed in some of the islands of the Gulf of Mexico. In Charleston it spread with great rapidity, ultimately attacking almost the entire population. In this latter city the last occurrence of it that I have found recorded was in 1850, and is alluded to by Dr. Dickson, of South Carolina. In Calcutta, again, during the hot and rainy season of 1853, a variety of the same affection prevailed, and has been well discussed by Dr. Goodeve in the first volume of the 'Indian Annals of Medical Science' for that year, and to which I must refer you. Now, this disease has been called *scarlatina rheumatica* by Cocke and Copland, *exanthesis arthrosia* by Nicholson, and the strange cognomen of *dengue* has been popularly bestowed upon it. I have said that the first account of this disease goes not further back than 1824; but it is proper I should mention that Dr. Dickson, of Charleston, writes as follows:—"I recognize Rush's 'break-bone fever' of 1780 in Philadelphia as the first notice of a malady such as I have called dengue;" and Dr. Waring, of Savannah, alludes also to dengue under the title of "eruptive breakbone."

I cannot go into the details of this peculiar disorder: indeed, I have only alluded to it to show you that there occurs a fever, accompanied by arthritic pains and a red exanthem, whose true relations to scarlet fever yet require clearing up. However, I may just remark, that Dr. Dickson regards dengue as a distinct contagious disease, giving immunity from second attacks, and that it is *not* scarlatina; whilst Mr. Goodeve states that most of the symptoms characteristic of the latter affection found expression in some of the cases occurring in Calcutta. He says, "the fever eruption, reddened mucous membrane and tonsils, desquamation of cuticle, swelling of hands and feet, state of the tongue, albuminous urine, and all such as go to make up scarlatina; but it would be premature to assert that the cause is identical with that of scarlatina. I should say that it would require a longer series of observations of several epidemics, with careful examination of all the attendant circumstances, before we could pronounce the diseases to be identical." Again, Dr. Copland affirms, that the disease called dengue "was not a form of scarlatina is shown by the severity of the rheumatic or neuralgic symptoms," &c.; and "that it was not a rheumatic fever was shown by the undoubted propagation of it by infection," &c. I see that in some later observations by Dr. Mackinnon, in the third number of the 'Indian Annals,' he doubts whether any of the epidemics of India described as attended by red efflorescence of the skin can be identified with any of the varieties of the scarlatina of Europe, denies the disease we have referred to to be contagious, and for which, he says, the name of "the red fever" is as good a name as any other.

On reviewing the different accounts given by Indian and American writers of this puzzling affection, the disease appears in certain



places, and epidemics, to have had more the characters of rheumatism; whilst in others it has had more those of scarlatina. The case mentioned may be said to illustrate, so far as my own experience extends in respect to the relations between scarlatina and rheumatism, one form of the arthritic complication—namely, that occurring early in the course of the exanthematous disease. When it so occurs, the specific inflammation about the joints terminates, like primary or idiopathic rheumatism, in resolution or delitescence. But it may take place at a later period of the disease, when all has been thought to be over. It occurs after desquamation has made some progress, and then may terminate in the suppurative crisis. Now, this is peculiar about the rheumatic inflammation generally of young children; unlike in adults or older children, it may lead to purulent effusions into joints, and also about them. I have known this to occur in several instances, and it is more liable, I believe, to ensue in the secondary rheumatism of scarlatina. This is a fact well known to authors. If I recollect aright, Dr. Kennedy, of Dublin, has published something upon it, and Trousseau, I know, states that scarlatinal rheumatism is often more dangerous when localized to a single joint, than when attacking several articulations at one time, as it is then more inclined to terminate in suppuration, and even eventually to result in caries of the articulating surfaces. This circumstance, however, of the arthritic inflammations of infants and young children, not unfrequently terminating in the formation of matter, has led some pathologists to deny the true rheumatic nature of the disease in question. I must confess, too, it does seem to me not improbable that the results of pyohæmia, or purulent infection, of phlebitis, umbilical or otherwise, may, along with other forms of abnormal action, have been occasionally placed to the credit of ordinary rheumatic inflammation. But Mr. Henry Lee, who has paid great attention to the subject of purulent infection, states that he has seen, as the result of the absorption of sero-purulent fluid from an ill-conditioned abscess, very severe rheumatism, affecting, in some instances, the pericardium and dura mater. In these cases there was occasionally more fluid secreted than in ordinary rheumatism, but in milder examples there was no such distinctive mark; they are said to have been “in every sign and symptom apparently identical.”

I have undoubtedly seen cases in children, which I should not have known from rheumatism, terminate in the suppurative crisis. If it be said, then such cases therefore could not have been rheumatism, the argument is of course settled; but it appears to me only so by a *petitio principii*. In adults, again, rheumatism does occasionally, however rarely, terminate in the formation of matter. In this case of mine some mischief ensued certainly to the mitral, if not also to the aortic valves. It may be but slight, still there it is, and may lay the foundation for changes in after years connected with the walls of the heart's chambers. The abnormal sound (which

some of you have listened to) at the apex is very loud, but this is not proof of the amount of structural mischief at the mitral, for there may be much noise and slight change, and but little noise and great alterations. The former, I hope, is the case here; but from the pulse being so small at the wrists, my hope is not to be too much trusted too. A German pathologist affirms it to be a general thing in scarlatina for the first sound of the heart to be aspirated or blowing, which is a result of the altered state of the blood, and not of the valves, and is a proof that scarlatina and all its complications arise from one common blood disorder. I presume he must mean to refer only to the sound at the base, and not at the apex (where our worst one is), of the cardiac region. Sounds at the base may be of hæmic origin, but at the apex they are, I believe, always of structural derivation.

The liability of the heart to become affected during scarlatina has been known for some time. Roux in 1819, and Krukenbergius in 1820, are said by Rilliet and Barthez to have referred to the occurrence of pericarditis in connection with scarlatina and measles. Trousseau says Bouillaud pointed it out; but certain it is Mr. O'Ferrall, in 1835, detailed to Dr. Graves, of Dublin, how he was obliged to have recourse to leeching, calomel, and James' powder, to overcome acute pericarditis in connexion with scarlatina. Several later writers, as Burrows, Willis, Joy, &c., have noticed this complication; and not long ago, M. Trousseau stated it as his belief, that "many cases of organic disease of the heart, which only become evident at an after period, have had their origin in scarlet fever." But, so far as I know, we are most indebted to Dr. Scott Alison for prominently bringing this matter before our notice, though it has been said that the frequency of the complication has been somewhat exaggerated. You will find Dr. Allison's original paper in the 'Medical Gazette' for 1845. The case I have mentioned makes the third one of heart complication during scarlatina that I have seen, and here it has occurred in connexion with an arthritic affection. One might *à priori*, suppose the sequences of the phenomena would always thus present themselves, but it seems that it is not so, as the involvement of the cardiac organ is alluded to by writers, as well as seen by myself, without the arthritic affection having preceded or accompanied it. I find it remarked that in the Stuttgart collection of papers on "Children's Diseases," the occurrence of purulent collections in the pericardium during scarlet fever is mentioned by Von Ammon, whilst effusion of pus beneath the periosteum and in the substance of muscles has been recorded by others. It is, therefore, possible that the rheumatism in this case had, in one sense, nothing in itself to do with the cardiac affection, but that both were the effects of one same and common cause, and that this cause was the same condition of the blood which gave rise to every other manifestation of the scarlet fever.

But it is said that the rheumatism occurs, like the dropsy, from

unnecessary or incautious exposure of the child to cold; whereas, in the latter case, we find the disease will come on where no such exposure was known to have taken place. We frequently find this secondary rheumatism occur without any cardiac involvement arising, while the primary form, in children, is very far more apt to include the central organ of the circulation within its grasp than at other periods. Had it been my intention to treat of scarlatina or rheumatism substantively, I must, when speaking of the nature of these maladies and their complications, have said much about uric and lactic acids, of urea in the blood, of a specific poison, of the necessity of that poison being eliminated from the system, of the peculiar irritative action of the urea or some other poison in the blood upon the serous membranes, of an elective affinity in scarlatina for the kidneys, and many other topics of the like nature. But I should have felt it my duty to have impressed upon you at the same time, that these would but have helped us to hypothetical and very obscure explanations of points which it must be confessed an exact and valid pathology is not as yet able to include within its grasp. All that I now lay stress upon, therefore, is a certain observed sequence of phenomena—*Scarlatina*, *Rheumatism*, and *Heart-disease*; a sequence observed sufficiently often, and under such intimate relations of time and place, to warrant us in associating these phenomena in casual connexion, however the true relations of this connexion may be afterwards definitely fixed. I would also, in conclusion, recall to your memory, that whilst we have had recorded experiments on animals, in which the kidneys have been removed, or the ureters tied, &c., and cases related where the secretion of urine has been suppressed from stoppage of the ureters by calculi and new formations, and which cases and experiments have been followed by vomiting, dryness of the tongue and mouth, &c., intense thirst, altered or husky voice, serous profluvia, great perspiration, convulsions, deep stupor, and death. I am not aware that dropsy, affections of the synovial membranes, of the pleura, or of the pericardium have followed, as in scarlet fever.—[*Lancet*.

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*On Dilution as a Principle in Therapeutics.* By BENJ. BELL, Esq.,  
Edinburgh. (Read before the Medico-Chirurgical Society.)

[In the administration of remedies of a metallic nature, we may err in not having them sufficiently diluted. Our purpose should be to gain ready entrance for them into the blood: take for example iron. We know that the entire blood of an adult does not contain more than 30 grains, and that this is deficient in anæmia. But what use can there be in giving such large quantities when so little is required? Our doses, then, ought to be small in quantity, and amply diluted. We may learn the same lesson by examination of medicines prepared for our use in the great laboratories of Nature. The



famous spring at Pyrmont contains about half a grain in the pint of water; that at Tunbridge Wells only about one-third of a grain; the same also in the bromine and iodine springs of Kreuznach; they exist under the same condition of remarkable dilution. But we cannot doubt their virtue in glandular swellings and scrofulous diseases. May we not, then, take a hint from nature, and prescribe our metallic preparations in smaller doses, and largely diluted?]

Of late years, I have seen reason to believe that all the benefit derivable from certain metals, as remedial agents, may be secured by comparatively small doses, provided that they are sufficiently diluted. I have seldom trusted to what could be called very minute doses; but so far as my observations go, I have a strong impression that, within certain limits, we do not increase the efficacy of such medicines by adding to the quantity prescribed. For example, eight or ten drops of the muriated tincture of iron in a large glassful of water, will, if useful at all, do as much good to our patient, as double or treble the quantity. And a similar remark applies, in my opinion, to the iodide or bromide of potassium, a single grain, or at most two of either, in a glass of water, being capable of effecting all the benefit of larger doses. We have already seen that the natural springs of world-wide celebrity present these ingredients in the proportion of one-third of a grain to sixteen ounces, and therefore we shall probably find, upon more extended trial, that corresponding doses of our pharmaceutical preparations, similarly diluted, will answer every purpose.

It may be observed in passing, that although no strictly analogous argument, furnished by the chemical composition of natural springs, can be urged in regard to the administration of antimony, the principle of dilution is probably no less applicable to that important remedy. Without venturing to speak very dogmatically on the subject, I have a pretty strong conviction that we both increase its remedial power and lessen its tendency to cause sickness by diluting our antimonial solution. Many practitioners suppose, that without the production of nausea, we miss our object in subduing pulmonary inflammation, the principal disease for which that metal is prescribed; but I doubt the soundness of this view, and am inclined to think that every object may be gained without sickening our patient, just as iron and mercury can produce *their* curative effects without the former causing headache, or the latter salivation. Our aim should be to bring the antimonial into contact with the capillaries of the inflamed part, and this, probably, will be best promoted by presenting it in a form fit for immediate absorption into the circulating fluid. When this is attended to I find it seldom necessary to give more than the sixteenth or twenty-fourth part of a grain of tartrate of antimony in successive doses.

Another *à priori* argument, in favor of this practice, may be adduced. Unless a metallic medicine be administered in a state of proper dilution, *that condition* will be secured by the secretion of

more or less fluid within the stomach itself, in order that the foreign matter may be in a fit state for being taken up and appropriated by the blood. But it is evidently desirable that this secreting process should be kept within as narrow bounds as possible, in every case standing in need of tonic remedies, and therefore, if it can be rendered unnecessary, even in part, by previous dilution *ab extra*, we secure an advantage for our patient. If, however, we still adhere to large doses of the active ingredients, it is obvious that, in order to effect the necessary dilution, we must increase the entire quantity of liquid so enormously as to oppress the stomach, and derange the digestive process.

Other advantages of moderate doses, largely diluted, taking their efficacy for granted, will be readily admitted; for besides being less hurtful, it may be, to the teeth, they are also less unpalatable and better adapted on that very account for being taken and digested with the food, a point, the importance of which has been long fully recognised by practical men. That this last advantage is not imaginary, may be gathered from our familiar experience regarding the chloride of sodium. Mixed with the food at meals, although useful in helping digestion, it has no aperient action; but the same quantity dissolved in water, and swallowed when the stomach is empty, before breakfast, will almost certainly open the bowels. In the former case, it is absorbed gradually in company with the food; in the latter, being presented too abruptly and strongly to the fastidious capillaries of the portal system, it is rejected by them, and hurried onwards through the canal, from convulsion to convulsion, and hence its qualifications as a purgative. But, if the solution be a concentrated one, it will probably never reach the bowels, but act as an emetic, and be rejected at once from the stomach. And cases are met with, in the annals of toxicology, where death itself was occasioned by large and irritating doses of common salt. Supposing it, however, to act as a purgative, the explanation of its action given seems preferable to the *endosmosis* theory, which appears to be too mechanical, and ignores entirely the vital affinities and endowments so conspicuous in the living body. We have supposed the solution of the chloride of sodium to be moderately concentrated, like seawater, or in the proportion of about a drachm to four ounces; but, if we double the allowance of water, we shall probably find that the action is no longer purgative, but diuretic. The salt has entered the circulation and will be eliminated by the kidney.

It may be objected, perhaps, to the principle we are advocating, that it takes for granted that the whole of the medicine swallowed is absorbed and received into the blood, whereas, allowance should be made for a great part of it passing through the alimentary canal unchanged, and more, therefore, ought to be administered than we can expect the system to appropriate. That this superfluity does exist, when large doses are given, we have already suggested, and also that it is probably a source of injury to the patient; but the

likelihood of such being the case, is obviously much less when the dose is small and well diluted. Moreover, we are very apt, I suspect, to over-estimate the quantity of any foreign substance which is needed, in order to act upon the human body.

I have repeatedly seen so small a dose as the eighth of a grain of extract of belladonna taken into the stomach of a young person, cause full dilation of the pupil. Now, if we only consider how extremely minute must be the portion even of this very small dose, when circulating through the blood-vessels, which could come into contact with the nerves of the iris, we may form some conception of the susceptibility and delicacy of our frame. To take another illustration, let us consider the remarkable efficacy of the muriated tincture of iron in erysipelas, or in acute desquamation of the *tubuli uriniferi* following scarlet fever. An adult is labouring under the former of these complaints, with much febrile disturbance, as indicated both by the hot dry skin and the frequent bounding pulse; we administer ten drops of the tincture every two hours, and after two or three doses, as I have often seen, the symptoms give way, the skin becoming moist and cool, and the pulse slow and soft. A few grains of iron, at the very most, have mingled with the circulating blood, and of these a mere fractional portion has reached the congested capillaries of the inflamed region, and occasioned the favourable change, and in this way, a comparatively small dose of a substance confessedly foreign to the system, comes to fulfil the purpose we have in view with all the efficiency of a larger quantity.

A boy of ten years, we shall suppose, who has recently passed through an attack of scarlet fever, is observed to have œdema of the eyelids, a furred tongue, and a full, febrile pulse. His urine is of a dingy colour; it deposits a dark sediment, and is scanty and albuminous. Five drops of the tincture of iron in a glass of water, are administered every four hours; a speedy improvement commences, and in two or perhaps three days, the symptoms are entirely gone.

Such facts, besides enforcing the principle we have been inculcating, should teach us to deal tenderly at all times with an organization so finely constituted, and to administer our remedies under a more settled conviction that, if potent for good at the right time, they may also be potent for evil, when the case and the occasion are not favourable.

One may express himself in this manner, without verging in the very least towards the credulity of those persons who profess their faith in the power of infinitesimal doses. It is one thing to recommend half a grain in preference to five, and a very different thing to stand up, with unabashed countenance, for the millionth or billionth of a grain. The human mind is baffled in forming even a conception of such infinitesimal quantities; and, therefore, they may be placed in a category by themselves, for the use of those who take pleasure in believing everything that ordinary people are compelled to doubt. But is there no truth in the allegation, that some of our



large doses of remedies, intended to enter the circulation and mingle with the blood, must startle and stagger many reverential students of the human frame and functions, and so create, it may be, a hurtful reaction in favour of homœopathy, and other kindred eccentricities?

I would venture to suggest, that some topical appliances—those especially of a discutient nature—may be rendered more efficacious and useful, by attending to the same principle of ample dilution. For example, the most efficient mode by far in my experience, of employing iodine locally, is a solution consisting of two grains of iodide of potassium and one of iodine, in an English pint of water. It must be used warm, as a fomentation to the affected part, by means of a sponge, twice or thrice a day, for five or ten minutes at a time. In cases of glandular tumour and of fibrinous exudation into the cellular tissue; in chronic enlargement of the testicle or epididymis; in short, in all that class of disorders where iodine or mercurial ointment would seem to be indicated, I have often found it remarkably efficacious. The warmth of the application renders it more agreeable to most patients than if it were cold or unctuous, and at the same time probably increases its power by relaxing the pores, and so favouring absorption. It seems to be much preferable to the tincture of iodine painted upon the surface—a favourite remedy with many. The latter certainly does good in some cases, but we may doubt, I think, if it produces its beneficial effects in the manner usually attributed to iodine and its compounds. It is a strong stimulating fluid, and sometimes occasions a good deal of local suffering; so that, when attended by favourable results, it probably resembles in its action a common blister, or the croton-oil ointment, and relieves inward congestion or chronic inflammation *indirectly*, by its power as a counter-irritant, and not *directly*, by hastening the process of absorption. The distinction is not unimportant; because some swellings, of inflammatory origin, may reasonably be expected to give way under a system of counter-irritation; while other growths, of a slower and colder constitution, will be more amenable to a treatment less active and heroic.

Another illustration of the same principle seems to be afforded by the outward uses of croton oil. When employed in a form tolerably concentrated, it induces, as we all know, an eruption of minute vesicles; but when mixed with a large proportion of olive oil, and rubbed over an extensive surface, such as the abdomen, it sometimes shows its power as a purgative, in the most unequivocal manner. One case in particular, that I attended with the late Dr. Thatcher, occurs to me, in which this treatment was eminently successful. A young gentleman seemed to be dying of obstruction in the bowels. As all the ordinary means of relief had been exhausted, and circumstances forbade the farther use of internal remedies, a liniment, composed of one part of croton oil and twenty-four of mingled olive and camphorated oil, was used in an embroca-

tion to the belly; and very speedily, and in consequence, as I believed at the time, the peristaltic action downwards was restored, and the obstruction overcome. Of course, we may have mistaken in this, as in other cases, the *post* for the *propter hoc*; but such facts seem to suggest the propriety and desirableness of new experiments in the same direction.

The spiritus terebinthinæ is another local remedy which we may probably employ with advantage, in a less stimulating shape than we are in the habit of doing. This has been suggested to my mind by witnessing the effects of small doses of turpentine in certain forms of iritis, and in rheumatic ophthalmia. In exercising these curative effects upon textures so remote from the stomach, the medicine must be supposed to enter the vascular system, and to modify the blood by stimulating one or more of the organs of excretion; and it is reasonable to infer, therefore, that the well-known remedial power and efficacy of terebinthinate embrocations in certain chronic forms of muscular rheumatism and neuralgia, *may* depend very much upon a simular therapeutic action. And on this supposition, we should take care that the local remedy is not presented in a form too stimulating, our object being, not so much to cause counter-irritation by it, as to secure its absorption by the integuments covering the seat of pain.—[*Edinburg. Med. Journal*.

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*On the Management of Placenta Prævia.* By Dr. ROBERT BARNES.

The author passed in review the actual state of obstetric science and practice in relation to the pathology and treatment of placenta prævia. He showed that the prevailing belief was, that so long as the delivery of the child was not effected there was no security against hæmorrhage, and that hence the rule in practice of proceeding to forced delivery as early as practicable was almost universally inculcated, the only exception consisting in the more or less general substitution of the plan of totally detaching the placenta. The author thus showed that, while the practitioner was anxiously waiting for the moment when the dilatibility of the cervix uteri would permit the passage of the hand, for the purpose of turning, the patient might perish of flooding; and that, therefore, in the most severe class of cases, those of central placenta, some other resource, some means of placing the patient in security against renewed flooding, before the full dilatation of the os, was eminently desirable. Dr. Barnes then explained the physiological course of a labour with placenta prævia, and the mode in which Nature sometimes arrests the hæmorrhage before the expulsion of the child. He illustrated, by the help of an ingenious and interesting diagram, that a stage of labour arrives when the recurrent contractions of the womb do not entail any further flooding; that the pains return in their usual course, with the usual effect of fur-

ther dilating the os uteri, and forwarding the labour, but without causing any further flooding; that the labour was in fact resolved into a natural one, and would be safely concluded by the natural powers. Reflection upon these cases had led Dr. Barnes to doubt the truth of the obstetric dogma, which declares that there is no security against hæmorrhage, so long as the presence of the liquor amnii or the child in the womb prevents full contraction. Dr. Barnes then unfolded the anatomical, physiological, and clinical facts which led him to the conclusion that, under proper restrictions, Nature might in many cases be trusted with more confidence than was generally believed. The clinical facts, he said, had come to him first, and led him to examine into the anatomical and physiological bearings of the case. He related cases in illustration, and quoted a commentary upon one of these cases from the memoir he had published ('Lancet,' 1847), in order to establish his priority in the enunciation of the views he now laid before the society; and adverted to the fact, that he had since the publication of that memoir, constantly taught, in his lectures on Midwifery, the same doctrine; and stated that even the original of the diagram now exhibited, rudely sketched, was also figured in the memoir referred to. He had, therefore, believed his views to be original, and was surprised to find, in several numbers of the 'Berlin Monatschrift für Guburtskunde' for the present year, a controversy between Dr. Cohen, Dr. Credé, and Professor Hohl, in which Dr. Cohen for the first time expounded similar views to his own, whilst Dr. Credé, referring to writings of 1853-54, also claimed them; and Professor Hohl assigned them to Dr. Zeitfuchs so far back as 1843. Dr. Barnes acknowledged, with pleasure, that Dr. Cohen's views of 1855 fully confirm those put forth by himself in 1847; but he found, in the writings of Credé and Zeitfuchs, nothing whatever to show that either had, in the remotest degree, possessed himself of the points in question. But Cohen had gone beyond the author in proposing a new operation based upon the physiological and clinical facts expounded. This operation consists in—1st. Determining the side of the uterus to which the smaller flap of the placenta is attached; 2. In rupturing the membranes and detaching the placenta from this half of its circumference; 3. Exciting uterine contraction; 4. Hooking finger over edge of placenta, tearing membranes from the freed border of the placenta; and 5. In separating the placenta in a circumference of  $190^{\circ}$  to  $200^{\circ}$ . The greater half of the placenta, now freed from the dragging of the lesser half and membranes, is now drawn back, just as in placenta lateralis, with the uterus. From this moment there is no further danger. Cohen insists, like the author, on the impropriety of hastening labour unless urgent complications arise. Dr. Cohen refers to his experience to prove the efficacy of this method, but does not recite any cases in illustration. Dr. Barnes pointed out that the difference between his memoir and



that of Dr. Cohen consisted simply in this:—Cohen had, in 1855, carried forward the principle Dr. Barnes had enunciated, in 1847, by proposing the artificial partial detachment of the placenta, instead of trusting, as Dr. Barnes had recommended in certain cases, the execution of this operation to the powers of Nature. The author then quoted from Sir Charles Bell passages showing that the anatomical distribution and physiological action of the muscles of the uterus accorded with and explained the clinical facts observed in the course of intermissions and cessations of hæmorrhage from placenta prævia as set forth by Dr. Barnes. The author then explained the mode and mechanism by which the hæmorrhage in placenta prævia is arrested. The opening of the mouth of the womb, and the detachment of the placenta adhering to this part, are effected by the active contraction of the longitudinal muscles of the uterus; this active contraction shortens the cervix, when it intermits a passive contraction goes on, which maintains or even increases the shortening of the cervix. This shortening necessarily compresses the torn mouths of the vessels, and checks the flooding caused by each successive detachment of fresh placenta, until the detachment has gone to the boundary line, beyond which point the further expansion of the cervix has no effect, and when all fear of flooding is at an end. It was not therefore necessary that the uterus should be empty in order to arrest the flooding. The arrest depended upon the contraction of the cervix, which went on, although the fundus and walls were prevented from contracting. Dr. Barnes submitted the following as some of the conclusions deducible from his researches:—

1. In cases of placenta prævia, the hemorrhage is sometimes arrested spontaneously before the complete detachment of the placenta, before the discharge of the liquor amnii, and consequently before the expulsion of the child or the pressure of its head against the cervix.

2. That this spontaneous arrest of the flooding is owing to the sealing up of the vessels torn by successive detachments of placenta, and the attainment of a stage of labour when no further detachment can take place until after delivery.

3. That dangerous and even fatal flooding sometimes occurs while the os uteri is still closed, and so undilatable as to render it impossible or expedient to have recourse to forced delivery.

4. That in such cases it is eminently desirable to possess some means of diminishing the hemorrhage until the hand can be passed through the os uteri.

5. The spontaneous or artificial detachment of the cervical portion of the placenta competes with two most formidable operations, dangerous to mother and child—forced delivery, and the total separation of the placenta. The new principle of treatment may, in many cases, supersede forced delivery altogether; since the patient being secured against further flooding to resort to turning

when the flood has ceased is an unnecessary proceeding, although the os uteri may admit of it. In many more cases this principle will be the means of gaining the necessary time to admit of turning or other modes of forced delivery being performed with safety. In almost every case it may supersede the practice of wholly detaching the placenta, since the end in view being the arrest of the flooding, it is better to detach only just so much of the placenta as will effect this end, than by detaching all, to destroy the child.

•[*Medical Times and Gazette.*

*Medical Properties of Charcoal.* By JAMES BIRD, Esq.

Pure charcoal is known to possess two singular properties, first, the power of absorbing gases to an almost incredible extent, and secondly, the capability of rapidly oxydizing any dead animal or vegetable substance placed in contact with it, as explained by the experiments of Dr. Stenhouse and others. As charcoal is not chemically affected by either acids or alkalies, and is quite insoluble, its admixture with other substances is not incompatible, so that it may be combined with any other kind of medicine, *ad libitum*.

It is a powerful absorbent of fluids, whether aqueous or aeriform; and as it unergoes no change in the human stomach, it may with great truth be described as the only pure absorbent we possess, for the same cannot be said of æther, lime, magnesia, bismuth, or any other mineral absorbent, all of which form salts with the acids they meet with, sometimes to the complete subversion of all their original properties, while the vegetable or farinaceous absorbents, such as flour starch, gum, &c., are changed by digestion, giving off frequently offensive gaseous emanations as the results of mal-assimilation.

Charcoal is, therefore, recommended as a pure and effective absorbent, applicable either alone, or in combination with other remedies, to a cure of a large number of the acute disorders of the mucous surfaces of the alimentary canal, and also of those of the uterine passages, and particularly in those instances where the secretions are inordinate in quantity, or offensive in condition.

It may, perhaps, induce a more extended trial of charcoal powders if a few instances were named in which the remedy has proved eminently serviceable. In the exquisitely painful small ulcers within the mouth, on the inner surface of the lips or cheeks, which, at irregular intervals prevail to some extent, and are extremely troublesome, the following wash will be found an excellent remedy:—

R. Pulv. carb. ligni pur. ij.; mel. rosæ ʒi.; decoc. cydoniæ ʒiij.; aq. dest. ʒiv. M. Ft. lotio sæpe adhibenda.

This lotion is also useful in excessive pytalism; it speedily moderates the discharge, and instantly corrects its fetor, and its appli-

cation is extremely soothing and agreeable. The same may be said of it when used as a gargle in ulcerated sore-throat, the sloughs separating rapidly and easily, leaving a healthy surface underneath.

In the earlier stages of diarrhoea, a mixture composed somewhat as follows speedily gives relief:—

R. Pulv. carb. ligni pur. ʒj. ad ʒiv.; mucil. acaciæ ʒij.;  
syr. aurantii, tr. cardam. co. aa. ʒiv.; aq. dest. ʒiij. M.  
Sumat 4 drachms ʒtiâ, vel 4tâ q.q. horâ.

In the bowel affections of children, accompanied with worms, powdered charcoal, in doses of 10 to 15 grains, with one grain of ipecacuanha powder, and from 3 to 5 grains of rhubarb, taken at bed-time, acts like a charm, correcting disordered secretions with certainty and comfort, and promoting a healthy tone and action. In gastralgia and gastrodynia, charcoal powder, in doses of 30 or 40 grains, three times a day, in water, seldom fails to give relief; and in cases of severe tenesmus, accompanied by bloody or mucous stools, an injection into the lower bowel of one drachm of charcoal powder in a small quantity of thin arrow-root or gruel has been found to give almost instant relief.—[*Ibid.*

#### *On Chronic Ulcers of the Legs.* By F. C. SKEY, Esq., F.R.S.

Abundant have been the examples of treatment of chronic ulcers of the legs by means of the internal administration of opium. I know of no treatment at all comparable to this, so rapid or so efficient. These cases have had many observers, who can bear testimony to its value. Exactly in proportion to the amount administered is the regeneration of the defective structure. Years will probably yet elapse before this principle will be universally acknowledged, before the medical community will admit that in opium we have an agent far more valuable than that derived from its comparatively worthless power as a sedative. It is notorious, that the chronic ulcer—the disease of ten or even of twenty years' duration—is unattended with pain. To suppose that opium effects its local marvels by any sedative property in the drug, appears to me worthy only the advocacy of a senile-female, or of an uneducated youth. If we administer five grains of the soap and opium pill, night and morning, to a man advancing in life, who has been carrying about with him for ten years a large callous ulcer, with an ash-coloured base, surrounded by high walls of organized lymph, and in which there remains not a vestige of activity, good or bad, advancing or receding, the moisture from which is a hot ichor, becoming sanious under provocation,—if we examine carefully this surface at the expiration of forty-eight hours, we shall find it speckled with red points; these are future granulations, and, in ten days, the whole of the base of the wound will be carpeted with them.—[*Lancet.*



*Practical Deductions from a Clinical Record of Twenty-six Cases of Strangulated Femoral Hernia.*

Mr. Birkett, in a paper read before the Medical Society of London, (April 26th, 1856,) commenced by stating that the object of the paper was, first, to bring prominently into the foreground the causes of death; 2d, The circumstances by which those causes are brought about; and, 3d, The means by which they may be avoided. It was shown, by means of a table of the cases, that a certain number of unfavorable circumstances occurred in each case, and that, in proportion to the aggregate, as a general rule, the case was cured, or terminated fatally. But in some of the cases only two, three, or four unfavorable circumstances existed, and yet the patients died; and in these, as well as others with a larger number, the causes of death were sought for and demonstrated. Of the twenty-six cases, all of which were operated upon by the author, one-half terminated fatally. In the fatal cases, death resulted from causes over which the operation could have but little influence; and it was undertaken only with the view to place the patient in a condition more favourable to recovery. The causes inducing the fatal result may be thus enumerated:

1. The consequences of a journey performed while the patient was suffering with strangulated femoral hernia.
2. The defective constitutional nutrition of the patients generally.
3. Irrecoverable prostration, the result of long continued vomiting and strangulation of the bowel in aged women.
4. Violence inflicted on the hernia. To this cause, the death of not less than five out of the thirteen is to be attributed.
5. The administration of purgatives before the operation.

The author unhesitatingly preferred to reduce the hernia without opening the peritoneal sac in those cases in which the surgeon would be justified in returning the protrusion by the taxis, if it could be accomplished.

In the twenty-six cases, the peritoneal sac was opened in twelve, and the causes which prevented the reduction of the hernia without so operating were the three following:

1. The contents of the sac.
2. The morbid condition of the contents of the sac.
3. The dimensions of the neck of the sac, and the unyielding state of its tissues.

Six cases were related in which the author had reduced the hernia by a simple division of the fibrous tissues about the neck of the sac, and external to that covering of the hernia known as the fascia propria. To this simple method of relieving the constriction around the bowel the author gave the name of the "Minimum Operation." The causes of death in the fatal cases were shown, by *post-mortem* examination, to be referable to peritonitis, injury of the bowel inflicted in the taxis, exhaustion after fecal fistula,

phlegmonous inflammation, collapse, acute bronchitis, and perforation of the bowel. Of the cured cases, the minimum of hours during which the bowel was strangulated was three hours; the maximum was seventy-seven hours. Of the fatal cases, the minimum period of strangulation of the bowel was eleven hours, the maximum seventy-nine hours. Of the cured cases, the average number of hours during which the bowel was strangulated amounted to twenty-three. Of the fatal cases, the average period of strangulation of the bowel was forty-six hours. The causes of death were primary and secondary: 1. Prostration; peritonitis; gangrene of the intestine; perforation. 2. Bronchitis; abscess behind the peritoneum; phlegmonous inflammation and suppuration. The circumstances by which they were brought about: Age; a journey; the defective constitutional nutrition of the patient; the morbid state of the canal above the strangulated piece of bowel; injury of the hernia caused by the constriction of the ring, and by manual violence inflicted on it; the duration of the sufferings; the intensity of the constitutional sympathies; fecal fistula; neglect of the tumour; the administration of purgatives; the warm bath. The means by which they may be avoided are: By care in manipulation; the early relief of the bowel from constriction; the reduction of the hernia without opening the peritoneal sac; the exhibition of opium, and the avoidance of all causes likely to induce exhaustion.—[*Med. Times and Gazette.*

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*On Myeloid and Myelo-Cystic Tumors of Bones: their Structure, Pathology, and Mode of Diagnosis.* By HENRY GRAY, F.R.S.

The author detailed the history of nine cases of tumors of this form removed during life, with a minute description of the results of his own microscopical examination of six of the tumors.—The results at which he arrived were as follows:—That these tumors were not of a malignant nature, although in several of the instances given they have been so regarded both previous to and after removal by operation; that on the contrary, their minute structure bore the closest analogy with the normal constituents of the marrow and other elements of bone in the early periods of life: that their growth is confined to the osseous texture, or its investing membranes, the periosteum and dura mater; that they occur at a period of life when the normal constituents of the medulla exist in the greatest amount, and are developed in those parts of the osseous system in which those structures exist in a most distinct and well-marked form, (all the cases given took their origin in the epiphysial ends of long bones;) that they are occasionally mixed with the other elements of bone in a rudimentary state, as fibrous tissue and cartilage, and even with bone itself; that they may probably occur in any bone; that since they are thus found to consist of an abnormal amount of some of the nor-

mal constituents of the medulla cells, the name "myeloid" given to them by Mr. Paget is most appropriate (the author proposes to add the term "cystic" to such of them as present a mixture of cysts with the structure above described, and regards their fibrous element as most probably derived from the organization of lymph effused as the result of chronic inflammatory action, or from some abnormality in the development and growth of the fibrous element of bone:) that they occur in all the cases at present recorded at an early period of life, and that their growth is generally much less rapid than malignant disease, both which facts afford important diagnostic marks to distinguish them from malignant growths; that the absence of the malignant cachexia, of glandular lymphatic enlargements, and of diseased internal organs, combined with the facts that, although these tumors attain occasionally a considerable size, yet they present no tendency to ulcerate or obtrude externally, and generally retain some surrounding shell of bone within which they have grown, serve as additional aids to the surgeon in forming a diagnosis between myeloid and malignant growths; that they do not return when entirely removed; and that for all these reasons they are to be regarded as innocent tumors.—[*Association Med. Journal. New York Med. Journal.*]

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*On the Dropsy of Pregnancy.* By M. BECQUEREL.

Four forms of dropsy are observed in pregnant women, which are far from being of the same importance.

1. *Mechanical Dropsies*, perhaps the most common, are due to the pressure exerted by the gravid uterus, their production being favored by the lesser density of the blood in pregnant women, and the slight diminution of albumen that exists in its serum. These dropsies are confined to the lower extremities, are of no importance beyond their inconvenience, and disappear after delivery.

2. *Dropsies due to changes in the Blood, but unaccompanied by Albuminuria.*—The change in the blood which induces these dropsies, consists in a diminution in the amount of the albumen of the serum, a diminution that is sometimes considerable, and for which we can assign no other cause than the fact of the pregnancy, and its influence on the various immediate principles of the blood. This description of dropsy, like the two next, tends to become general. It is of importance to distinguish it from the two others, and especially the 4th, for it does not predispose to eclampsia. It is by analysis of the blood alone that we can establish its existence. It disappears also after pregnancy, but far more slowly. It has been observed that women suffering from it remain feeble for a long period, their "getting up" being slow and difficult.

3. *Dropsies with Changes in the Blood, and Albuminuria, but without Bright's Disease, properly so called.*—These dropsies are the



consequence of the diminution of the albumen of the blood, produced by its deperdition through the kidney. Until lately it was supposed that such loss might take place without material lesion of the kidney; but from the investigations made by M. Robin and the author, it results that this albuminuria is due to a special modification taking place in the epithelial cells of the tubuli, a modification consisting in the infiltration of the cells and tubuli by numerous granules of a proteric nature. This infiltration is analogous to that which M. Robin had already found in choleraic albuminuria, and like it is susceptible of cure. The absolute diagnosis during life of this disease from Bright's affection is very difficult, and yet it is highly important, as the prognosis must be entirely based upon it. It is in women who are the subjects of these dropsies that we have to fear eclampsia, and the predisposition to puerperal peritonitis. Eclampsia is not, however, a necessary consequence; and when we find general dropsy, change in the blood, and albuminuria co-existing, we still cannot affirm that this terrible accident will follow. On the other hand, whenever we find eclampsia we are certain of finding, not only dropsy, but albuminous urine, and change in the blood. In respect to the termination of this form of dropsy it may be observed, that if eclampsia does not supervene, a cure is almost certain, while, in the case of its occurring the result is dependent upon that of the eclampsia.

4. *Dropsies due to Bright's Disease.*—It is very important to establish the diagnosis of this form. We may lay stress upon the somewhat larger quantity of albumen, the presence of fragments of tubuli, of fibrinous filaments, and fatty globules. When eclampsia complicates this form it is invariably fatal; and even when eclampsia does not occur, the disease is not arrested after delivery. The dropsy continues to increase, the termination proving, after a certain period, fatal.—[*London Med. Times*, from *Medico-Chirurgicale*.

#### *Operation for Pharyngitis.*

At the session of the Academy of Sciences (Paris,) on the 21st of April, the following extract was read from a letter of M. Malgaigne:—

“With this strangulation, as with strangulated hernia, we attempt at first to accomplish reduction, and usually succeed. But when reduction is impossible, it is advised, as with strangulated hernia, to divide the bridle which strangulates it, even if it is necessary to repeat this section at two or three points. The danger of strangulation is thus diminished, but the reduction still continues to be impossible. At least I have never seen it accomplished after such an operation. What is the reason of this want of success? It is that the preputial ring, in producing inflammation,

ulceration, sometimes even gangrene, of the parts strangulated, commences by thickening the subjacent cellular tissue, and by producing extensive adhesions between the integument and the cavernous bodies. Dividing the stricture, though repeated, does not destroy these adhesions, and does not suffice for the reduction, while destruction of these adhesions, even without division of the stricture, is sufficient to allow the return of the parts to their place.

"Thus the study of this affection has led me to distinguish a new element, hitherto left in the shade. The establishment of this element gave a new indication, and this is the way in which I have met this indication.

"A young man came under my care the 11th of this month, for a paraphimosis of five days' duration, and already there was seen upon the back of the penis a superficial ulceration, embracing more than half of the circumference of the organ. The *internes* tried to reduce it without success. The next day, at the visit, I was no more fortunate; the adhesions of the integument to the cavernous bodies presented an insurmountable obstacle to it. I slipped a narrow bistoury flatways between the integuments and the cavernous bodies, by means of which I divided those adhesions to the extent of one centimetre (four-tenths of an inch). This did not suffice. I carried a probe-pointed bistoury into the incision, to complete the division of the adhesions throughout their whole extent, and the reduction was accomplished with the greatest facility. The next day, the engorgement of the prepuce had diminished, the third day the ulcerated surface had cicatrized, and the patient went out the 20th of April, having been well several days, and without experiencing any kind of accident."—*Am. Med. Mon.*

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*On the Action of Digitalis upon the Uterus.* By W. H. DICKERSON.

The writer commences his paper by stating that during the month of October, 1854, a patient in St. George's hospital, laboring under most severe menorrhagia, was cured by the infusion of digitalis, exhibited for the relief of cardiac affection, from which she also suffered. In consequence of this he had been induced to try the remedy, by the permission of Dr. Lee, in a series of cases of uterine hemorrhage which had occurred in the hospital. These cases, of which a table is given, were seventeen in number, and the general results of their treatment were as follows: In every case of uterine hemorrhage, unconnected with organic disease, requiring the employment of active remedies, admitted into the hospital after October, 1854, the administration of digitalis was had recourse to as the sole treatment, and the discharge was invariably arrested by it. The time which elapsed before the hemorrhage subsided varied with the dose in which the digitalis was exhibited. When large doses were given, as an ounce to an ounce

and a half of the infusion, the discharge never appeared after the second day; when smaller doses, it never continued beyond the fourth day. In uterine hemorrhage connected with organic disease, the remedy acted with less certainty; its exhibition was required for a longer time, and the effect was sometimes transient. The author then spoke of the mode in which the digitalis operated in controlling uterine hemorrhage; and after concluding that its effect could not depend on the sedative influence of the drug in the heart and arteries, he showed, by various experiments and observations, that the arrest of the hemorrhage was due to the action of the digitalis on the ganglia of the uterus, by which the organ was stimulated, and the muscular substance powerfully contracted.—[*Dublin Hospital Gazette*.

### *Eneuresis.*

Two methods for treating this troublesome affection having been given in our May number, we present the following, which we adopted in our practice long ago, from the *Medico-Chirurgical Review*, of January, 1849.—*Memphis Med. Recorder*.

R. Ex. Belladonna.

Ex. Hyoscyami, aa. gr. xvj.

Sacchari albi, ʒi.

Aq. Camphoræ, ʒ iss. Take a teaspoonful at bed-time.

In obstinate cases we have sometimes repeated the dose two or three times in the same night. We have rarely failed of success, though in one case we were obliged to give up the remedy before the cure was complete, in consequence of the excessive dilatation of the iris. We remember one case, where the disease had continued from early childhood till the age of seventeen, which was permanently cured by a week's use of the above prescription. The young man was unable to recollect a period at which he had not been constantly troubled with an attack on retiring to sleep. Where remedies so diverse cure the same disease, we are naturally led to the hypothesis that, though the symptoms are identical, the pathology is different; for example, we are disposed to think that where Dr. Merrill's remedy—the Iodine—was successful, irritation of the mucous lining of the bladder, was the cause of mischief, while in cases where the present treatment effected a cure, (Belladonna having a special tendency to the muscles of organic life,) the *sphincter vesicæ* had been the seat of the disease. D. F. W.

### *On the Detection of Phosphorus in Cases of Poisoning.*

Mitscherlich has published a very simple and satisfactory method of detecting phosphorus in forensic investigations. The matter to be tested for phosphorus is to be distilled in a flask with water and sulphuric acid, and the vapors conveyed through a



glass tube into a vertical glass condenser. This condenser is simply a glass tube which passes through the bottom of a wide glass cylinder filled with cold water, which is constantly renewed by a funnel. A vessel to receive the distillate is placed under the end of the condensing tube. (The arrangement resembles Liebig's condenser placed vertically.) If there be phosphorus in the substance in the flask, its vapor passes over with the stream into the condenser, and a distinct light is seen in the dark where the vapors meet the cooled portion of the tube. This light lasts for a very long time, and a luminous ring is usually observed. More than three ounces of fluid could be distilled from substances which contained only the  $\frac{1}{1000}$  of phosphorus without a cessation of the light. Even after fourteen days the effect was observable. An addition of oil of turpentine prevents the light, but alcohol and ether distil over, and then the light appears. In the distillate, globules of phosphorus may be detected and are easily recognized. These were observed even in a mass which contained but one-third of a grain of phosphorus in five ounces of matter. When the mass contains much phosphorus, the distillate contains phosphorous acid, which is easily oxydized and detected. The author found that phosphoric and phosphorous acids do not pass over when distilled carefully with water. A fresh human stomach boiled with water gives no soluble phosphates; on the other hand, a stomach in a state of decay yields to water phosphoric acid, which can easily be detected by ammonia and magnesia.—[*Chemisches Central Blatt, from Amer. Jour. Arts, &c.*]

### Bloodletting in Young Subjects.

Dr. Beck justly remarks that young subjects do not bear the loss of blood as well as adults. They fall into syncope more readily, and their lives are almost endangered by it. That their nervous systems are more powerfully affected, is considered by the fact that convulsions and coma more frequently occur after the loss of blood in children, than in adults. Nor will a repetition of the remedy be so well borne by the child as the adult, and if carried only a little too far, children sink under the loss of blood irretrievably. Leeching exerts greater power over children than adults, because of the greater vascularity of the skin, the effect resembling more nearly that produced by general bloodletting. Hence the so frequently fatal effects of leeching, the difficulties of which are further increased by the uncertainty as to the quantity of blood drawn. Too great caution cannot be exercised, therefore, in leeching children. The operation should be performed with the child in an erect posture, and as soon as paleness of the lips or face appears, the bleeding should be arrested, and the patient should be closely watched to prevent hemorrhage, which may prove quickly fatal. Dr. B. recommends matico as the best astringent remedy for ar-

resting this and other hemorrhages. The leaf is to be applied to the leech-bite and pressed upon it for a short time with the finger. For the cure of epistaxis, the powdered leaf is snuffed up the nose. Dr. B. thinks excessive bloodletting has been encouraged by the writings of Rush, who says, in his "Defence of Blood-letting," that "bleeding should be continued while the symptoms which first indicated it continue, should it be until four-fifths of the blood contained in the body are drawn away." The whole quantity of blood being estimated at 32 lbs., four-fifths is over 24 lbs.!—[*Memphis Medical Reporter.*

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*On Sulphate of Cinchonia in Intermittent Fever.* By Dr. JNO. S. DUKATE, of Fredericksburgh, Ind.

In the "Medical Observer," for January, 1856, I find an article entitled, "Report of fifty-seven cases of Intermittent Fever treated at the City Dispensary by the Sulphate of Cinchonia, by Dr. J. C. Welles." I have always held, that in order to test the therapeutical virtues of any article of the *Materia Medica*, especially of the so-called specifics, we should administer it alone, if tolerated by the stomach without combination; for who can tell, for instance, whether cinchonia or quinia cured the patient, when both are given together or alternately? Dr. Welles' article is not quite satisfactory, although very nearly so. In the account of case first, he states that the patient had taken ten grains of quinia combined with opium and piperine. He had a chill on the 7th and 8th—took cinchonia and had no chill on the 9th and 10th; he was then put upon sub-carbonate of iron. On the 26th of September he had a severe chill, and was again put upon cinchonia, and convalesced. So far as this case is concerned the treatment was too complicated to be entirely satisfactory, but it is not so with nearly all the other cases.

My object, however, in communicating this article, is to call the attention of the profession to the remedial virtues of cinchonia in intermittent fever, and to offer to them my experience with the medicine. Perhaps I may not have used the article so extensively as some others, but still my experience will contribute something to the common stock, and assist in judging of the value of the remedy.

I had never administered a grain of cinchonia until I saw Dr. Welles' article, when I determined to give it a fair trial in intermittent fever—which I have had a fair opportunity to do, as it has prevailed extensively in my locality during the past spring. In order to test its remedial value I administered it alone in every case, or at least using no other antiperiodic. I preceded its exhibition, however, always by an active cathartic. I have now used three ounces of this article in intermittent fever, and have come to

the conclusion, from what I have observed in using the above amount, that it is superior to the sulphate of quinine in the treatment of this peculiar and tenacious disease. Patients, also, seem to take it more readily than they will quinine, having, most of them, from frequent use become tired of its repetition.

The following cases may possess some interest:

1st. Mrs. B., aged 24, contracted an intermittent fever last autumn, which was promptly arrested by quinine, but relapsed again and again; paroxysms continuing at intervals during the fall, winter and spring. She became anemic, with a tendency to dropsical effusions. On the 1st of March I put her on the use of cinchonia—ordering her twenty grains divided into five grain doses, exhibited every four hours. It was of the tertian type, and on the day for the paroxysm she had some unpleasant coldness of the extremities, followed by slight febrile excitement.

After this was over she took eight grains more, and has not had another chill to this date, (June 15th,) and is in the enjoyment of tolerably good health. She is now using, for enlargement of the spleen, the proto-iodide of mercury internally, and iodine ointment externally.

2nd. Mr. S. was attacked last fall with intermittent fever, which became chronic. All the so-called specifics were used, but to no purpose, except to arrest the disease for a short time. He was put, by me, on the cinchonia without combination with any other medicine; after using thirty grains his disease was arrested, and has not since returned. A period of two months has now elapsed since he has taken any of the medicine, and previous to this his ague had returned about every two weeks.

3rd. This was a case of chronic ague, which had resisted quinine, and nearly all other remedies. He was put upon the cinchonia, and has now been free from the disease about one month.

This article might be extended by relating special cases, but it is unnecessary. It is sufficient to say that in every case of intermittent fever, whether recent or chronic, the sulphate of cinchonia has completely arrested the disease, and in but rare cases have there been any relapses. It may be thought by some that I have given the remedy more credit than it deserves, but I am of a different opinion. In every case I have given it alone for the purpose of *testing* its antiperiodic powers. No complication of effect has been produced by using quinine, piperine, salicine, strychnine, arsenic, or any other potent remedy. It is very clear that it is to the sulphate of cinchonia alone that the cures are to be attributed. I therefore feel justified in using it in all cases of simple intermittent in preference to quinine. I do not yet know enough of it to place that reliance upon it that I would on quinine in pernicious fevers, malarial neuralgia, &c., &c.

*Effects on the system.*—This article does not produce the same disagreeable effects upon the nervous system that quinine does. In



no case has my patient complained of tinnitus-aurium, vertigo, cephalalgia or gastric disturbance. In short, patient's feel no inconvenience from its administration.

*Doses.*—I think from twenty to thirty grains of cinchonia are required to completely arrest an attack of intermittent fever. My mode of prescribing it is to weigh out twenty grains and divide it into five doses, one to be taken every three or four hours, between the paroxysms, and in the absence of fever. If this quantity does not completely arrest the disease, I then give from eight to ten more, and the object is certainly accomplished. The cinchonia I have used is prepared by Powers & Weightman, and costs me one dollar per ounce.

[In a letter to one of the editors, from E. C. Woolley, M. D., of Butler county, in this State, the following language is used:—  
“I have used the sulphate of cinchonia exclusively, with very happy effects; succeeding in every case but one, in arresting the paroxysms of ague by the first administration of the medicine. I think it not at all inferior to quinine as an antiperiodic.”—EDS.]  
[*Cincinnati Med. Observer.*]

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*Treatment of Typhus Fever.* By EDWIN R. MAXON, M. D., of Geneva, N. Y.

What, then, are the indications in the treatment of Typhus? Shall we bleed, purge, and starve our patients, and thus increase the debility which the morbid agent has produced? Or shall we strive to support the sinking energies of the system, and thus enable it to bear up under and throw off, with its various excretions, the debilitating morbid agent it has so unfortunately imbibed.

From my experience in the treatment of typhus fever, for the past few years, I am compelled to believe, that with a proper sustaining course of treatment, nearly every case of typhus may be arrested, and the patient convalescent, by the fifth or sixth day; and that very few need be kept in longer than the ninth day, if attended to in season, and before any serious local inflammation has taken place.

The indications then are, to remove from the alimentary canal, any irritating matter which it may contain; to equalize the circulation; to promote perspiration; and to support the sinking powers of the system by tonics and a due amount of proper nourishment.

I therefore usually give, at first, two or three blue pills, and follow with half an ounce of castor oil; use warm pediluvia, morning and evening, the first day or two; also, rubbing the whole length of the back with a tepid infusion of capsicum in vinegar; and, generally, give the sulphate of quinine and Dover's powders, of each, grs. jv, every six hours, at first, for a day or two. I then

discontinue the Dover's and give pulv. camp. gr. j, with quinine sulph., grs. iij, every six hours, and continue till the fever is arrested, giving crust coffee, with milk, at first freely, as nourishment, and as soon as the stomach will retain it, toast every six hours; and, by degrees, other nourishing and digestible food, as the appetite generally returns and calls for it.

Such are the means which I have found most effectual in arresting typhus fever; and even in cases in which, through neglect, or maltreatment, local inflammation has supervened, I have found this course to do well, in conjunction with sinapisms, dry cupping, or blistering, as the case may require.—[*Buffalo Med. Journal*.

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*Mode of Reducing Strangulated Hernia, after failure of the Taxis, by a Bloodless Operation.*

M. Seutin, the eminent surgeon of Brussels, is endeavoring to establish, in a Belgian Medical Journal, the superiority of *tearing* either the inguinal or crural ring, over incising the same, for the reduction of strangulated hernia. He quotes experiments on the dead body, and several successful cases; and is confident that his method will soon supersede the operative measures generally resorted to. He places, first, great reliance on graduated taxis continued with due precautions for a considerable period; and when this fails, he endeavors to hook his index-finger round the margin of the ring, by passing it between the tumour and the abdomen; and by using a certain force, he causes the fibres of the external oblique to give way and crack to an extent sufficient for the reduction of the hernia. M. Seutin defends his practice with considerable ability, and hopes trials will be made.—[*Lancet*.

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*Alkaline Treatment of Rheumatism.*

The (Burlington) Medical and Surgical Reporter gives a table of twenty six cases of acute rheumatism treated by the alkaline method, in New York Hospital, under the care of Dr. John H. Griscom. The average time that the patients were under treatment was about thirteen days, and the whole duration of the attack twenty-one days. The treatment consisted in the administration of the supertartrate of potassa and soda, every hour, and the application of an alkaline and opiate lotion to the swelled joints. As the urine became less acid, corresponding improvement in the symptoms was noticed.—[*Boston Medical and Surgical Journal*.

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*Danger of Employing Iodine Injections for the Cure of Hydrocele.*

M. Gosselin made an interesting communication to the Société de Biologie, on the 24th of May. He has ascertained that in three cases where, after the death of patients, he has examined the testi-

cles, there is a peculiar danger in employing iodine injections in the vaginal cavity as a means of curing hydrocele. This danger consists in the absence of the secretion of a sperma fit for fecundation. In these three cases, no spermatozoa were found in the seminal vesicle of the side, where a hydrocele had been treated by iodine injections. In experiments upon dogs, M. Gosselin has found, also, that after such injections, the production of spermatozoa does not take place, and that the testicle becomes pale and smaller than before.—[*Med. Times and Gaz.*]

#### *Etiology of Congenital Deafness.*

In a paper read before the French Academy of Medicine, M. Ménière states that the intermarriage of relations has more effect than any other cause in producing deaf-mutism. This is shown by the fact that the disease is nowhere so common as in those isolated communities where almost all the inhabitants are related to each other, as the Canton of Berne, in Switzerland, where the degeneracy of the race is seen in all its deformity—cretinism, idiocy and congenital deaf-mutism.—[*Gaz. des Hop.*, and *Boston Med. Jl.*]

## EDITORIAL AND MISCELLANEOUS.

*American Contributions to Medical Knowledge.*—The multiplicity of medical periodicals in the United States evinces a degree of activity in the medical mind of our countrymen that has no parallel elsewhere; for while we have between thirty-five and forty regular medical journals, besides the periodical issue of the transactions of a large number of Societies, to say nothing of the publications by the Eclectic, Botanic, Homeopathic, Hydro-pathic, and other quondam brethren, we believe that the British and French have only about a dozen each, and that the whole of Europe does not furnish as many as we do. And yet it is very questionable whether this state of things will ultimately prove beneficial to the profession at large, or even to its American branch.

Under existing circumstances, no one can become acquainted with the workings of the American medical mind without reading a number of periodicals well calculated to stagger any but an editor, and even editors are not always proof against the accumulated load of their table. It cannot be denied that by increasing the number of journals we correspondingly multiply that of contributors. Many a physician, the result of whose observations might be useful, will feel himself stimulated to write and to impart his experience to others, if a journal be started in his neighborhood, who would otherwise have remained silent. Others will be disposed to imitate his example, and unexpectedly, perhaps, realize the fact that they



also have views that ought to be made known, and that writing is not so difficult as they thought, nor the exclusive privilege of the favored few. Men are thus accidentally trained to the art of composition, and often become accomplished writers. In this way journals are eminently useful within the sphere of their influence, and we would be the last to approve of any diminution of their number. We would, on the contrary, like to see as many published as the profession can or will support. But we must repeat that, in the present state of things, much of most valuable matter intended to reach the general eye through such channels is never heard of beyond the more or less restricted limits of their own circulation.

It cannot be expected that any practitioner in the United States will subscribe to all the American medical periodicals, besides those from abroad; and if any were found so liberally inclined, it is not presumable that he would or could give them all even a hasty perusal. With the exception of the copies we send to Europe in exchange for their publications, we may say that *our* periodicals are entirely unknown in foreign countries—whereas several of their journals are reprinted in this country, and extensively patronized. The writings of Europeans are not only brought directly to us, but our own journals cull most assiduously from them every paragraph supposed to possess the least interest. While our local periodicals are thus actively engaged in heralding the achievements of Europe, those of domestic origin remain unnoticed. In addition to the extensive circulation among us of European journals and reprints, the publications of Braithwaite and Ranking give a degree of permanency to their papers which is denied our own. I say, denied our own, because it is quite notorious that these “retrospects” and “abstracts” are devoted to the propagation of European views, and almost entirely silent with regard to what is said or done in America. Take up these semi-annuals, number after number, and you will look in vain for any evidence of the mental activity to which we have referred. Can it be that we do or say nothing worthy of permanent record? Foreigners are perhaps not so much to blame in this matter, when some of our leading periodicals make an equally meagre showing for us under their heads of “Domestic Summary,” “American Intelligence,” &c. There is indeed no journal issued in our country which contains even the slightest notice of one-fourth of the valuable contributions to medical knowledge by American writers. The petty jealousies of rival schools and cities, and the more significant evil of sectionalism, tend materially to fetter periodicals sustained by antagonistic interests, and consequently to restrict their sphere of usefulness. We might mention some important discoveries in diagnosis, and in the treatment of particular diseases, which have never been alluded to in rival cities and sections of the Union, while some of the verriest puerilities of foreign prints will be found going the round in every journal of the land.

Now, we need a remedy for the evils pointed out, and the object of these remarks is, to urge upon the profession the adoption of one that may be effectual, without interfering with the interests already involved in local journalism. Let a work be published by subscription, semi-annually, bearing the title at the head of this article, or any other of similar import. Let it consist of three parts: the first, to be made up exclusively of such papers contained in the original departments of American Medical Journals, as may be deemed by competent supervisors, worthy of permanent record; the second, to be devoted to the review of American books on medicine and its collateral branches; and the third part, to contain abstracts of the contents of our medical journals, general medical intelligence, &c. Let the conductors of such a journal be men of industrious habits as well as of competent abilities, whose sole object will be to furnish us a complete and impartial reflex of the workings of the American medical mind during the six preceding months. Such a work, if well conducted, would enable us to become acquainted with the views of men of ability in every section of the country, and would at once become a standard book of reference in Europe, as well as in America. Writers might then enjoy the satisfaction of contributing to the literature of their own immediate neighborhood, and still feel that by so doing, their labor was not necessarily restricted to the limits of their local periodical. With the consciousness that merit would entitle their papers to a place in the proposed national work, they would be actuated by an incentive which they do not now experience, and would strive to do themselves credit abroad, as well as at home. Such a work would not conflict with the interest of existing periodicals, because it would publish no paper that had not already appeared in a local journal, with the exception of reviews. Physicians would naturally continue to support the journal of their own neighborhood, and take also the national work for more extended knowledge, as they do now the reprints of European retrospects.

We have no doubt that such a work, as we propose, would meet with the approbation and patronage of the American Medical Association, if the subject were brought before that enlightened body at their next meeting. We appeal to our editorial brethren, throughout the length and breadth of our great confederacy, to aid us in bringing about so desirable an undertaking. Surely there are many men in our large cities who have the requisite qualifications for such a task; and who, living where the facilities for printing and general dissemination are abundant, might find it advantageous to embark in the enterprize.

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*Escape of Great Vessels by their Elasticity, from Balls.* By G. H. B. MACLEOD.—There is no circumstance in gunshot wounds which is more striking than the wonderful way in which the great vessels, by their elasti-

city, escape from the ball in its transit. Thus bullets innocuously traversed parts where one would suppose a pin's head could not be placed, without wounding a vessel. True, the fact that such cases remain to be seen, results from the vessel not having been opened, and we do not know in how many cases the result was not so fortunate, but still, viewed merely as happy escapes, they are curious and interesting. In the course of the femoral vessels, this phenomenon is particularly common. Through the axilla, through the neck, out and in behind the angles of the jaw, between the bones of the forearm and leg, balls of every size often take their passage without harm to the vessels. Take the following cases as examples: A soldier was wounded at Inkerman, by a ball which entered through the right cheek and escaped behind the angle of the left jaw, so tearing the parts that the great vessels were plainly visible in the wound. Three weeks after he was discharged without having had a bad symptom. A soldier of the Buffs was struck in June last, when in the trenches, by a rifle ball, in the nape of the neck. It passed forwards round the right side of the neck, up under the angle of the inferior maxilla, fractured the superior maxillary and malar bones, destroyed the eye, and, escaping, killed another man who was sitting beside him. This man made a recovery without a bad symptom.

A French soldier at the Alma was struck obliquely by a rifle ball, near, but external to the right nipple; the ball passed seemingly right through the vessels and nerves in the axilla, and escaped behind. His cure was rapid and uninterrupted. Endless numbers of similar cases may be seen in any military hospital.—[*Edinburgh Med. Jour.*]

*Treatment of Erysipelas.*—M. Velpeau gives the results of his treatment of 1000 cases of Erysipelas. He places the greatest reliance in *iron*. He employs the *proto-sulphate of iron* in solution, about twelve grains to the ounce of water—or as an ointment, eight parts to thirty of lard. In forty cases in which this was exclusively used, the erysipelas yielded in from twenty-four to forty-eight hours. The ointment is more easily applied to some parts than the lotion, but is somewhat less efficacious. It should be used about three times a day. The lotion should be applied by soft compresses or cloths kept constantly moist.—[*Bull. de Therap.*—*Boston Jour.*]

*Removal of Milk in the Breast.*—Mr. Gibbon states in the *Lancet*, that the application of belladonna to the mamma is an excellent means of checking the secretion of milk. With a lotion consisting of half a drachm of the extract of belladonna to half a pint of water, he has succeeded in arresting the secretion in three protracted cases, where a variety of expedients had failed.—[*Boston Med. Journal.*]

*Formula for the Internal Use of Chloroform.*—M. Danneey, pharmacien, of Bordeaux, recommends the following formula: Pure chloroform, half a drachm; oil of sweet almonds, two drachms; gum arabic, one drachm; syrup of orange flowers, one ounce; distilled water, two ounces; mix the chloroform with the oil, and make an ordinary oily draught. The author also gives a very ready mode of testing the purity of chloroform. Mix the latter with some oil; if the chloroform be quite pure, the limpidity of the oil will not be destroyed; whereas, any chemical impurity, however small, will give rise to a cloud.—[*Lancet.*]



*Rapid Detection of Sugar.*—M. Botte has several times employed the method suggested by Liebig of quickly detecting sugar. A small quantity of ox-gall is dissolved in the suspected fluid in a test-glass, and a quantity of concentrated sulphuric acid equal in amount to that of the fluid in the glass is rapidly added, care being taken to pour it along the side of the glass. If sugar is present a beautiful purpurine is immediately produced.  
[*Rev. Médicale—Med. Times and Gazette.*]

*Vaccination in Relation to Blindness.*—Statistical researches show us that, prior to Jenner's discovery, of 100 cases of blindness, 55 were due to small-pox; and Dr. Dumont, physician to the Hospice for the Blind, has recently supplied an interesting account of the progressive decrease of that proportion. Among the blind of sixty years of age, he finds this variety of cause in 12 per cent.; in adults, it only exists as 8 per cent.; and, in children, only as 5 per cent. We may take as a mean, counting all ages, about 7 per cent., which, as at the commencement of the present century, the proportion was 35 per cent., exhibits a diminution of 28 per cent.

[*Med. Times and Gazette.*]

*Solution of Gutta Serena.*—Mr. Maisch, of New York, advises the following method: One part of the best commercial gutta serena is cut into small pieces, and by agitation is dissolved in twelve parts of chloroform. On standing for a day, all the coloring matter rises like a scum to the surface, leaving the solution clear. This may then be easily drawn off to the last drop. A wide glass tube, narrower at the bottom, and so arranged that both ends may be closed with corks, is the only instrument necessary. After the separation is complete, the upper cork must be removed, and the lower one loosened, so as to allow the fluid to run out slowly. The advantages of this solution over collodion consist in the absence of contractile power and gloss, and in its elasticity and greater resemblance to the skin in appearance.—[*Memphis Med. Recorder.*]

*Pectoral Syrup.*—Take of ipecacuanha, one ounce; seneka, three ounces; refined sugar, two pounds; sulphate of morphia, sixteen grains; oil of sassafras, ten minims; make two pints of syrup. Macerate the ipecacuanha in coarse powder, for fourteen days, in one pint of diluted alcohol, express, filter, and evaporate to six fluid ounces. Next digest the seneka in coarse powder, with ten fluid ounces of water, and two fluid ounces of alcohol, at a heat not exceeding 104° F., for six hours, strain, express and filter, adding, if necessary, enough water to make ten fluid ounces. Mix with this the tincture first obtained, and dissolve in it the sugar, at a gentle heat; strain, and while yet warm, add the morphia and oil of sassafras, dissolved in a very little warm alcohol. The dose is from one to two teaspoonfuls. This is Jackson's formula as prepared by Stevens. (See *Amer. Journal of Pharmacy*, May, 1856.) The prescription is a favorite one with many Northern physicians, as an anodyne expectorant; and is, doubtless, a better remedy than any of the numerous compounds sold in the shops, all which have opium for their basis. Great mischief is undoubtedly done in pulmonary diseases, by the injudicious and extra-professional use of all these anodyne cough mixtures. It is far from being true that every case of cough requires or admits the use of anodyne remedies.—[*Ibid.*]

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## ORIGINAL AND ECLECTIC.

### ARTICLE XXV.

*An Essay—Historical, Theoretical and Practical—on Hydro-Therapeutics.* By JNO. STAINBACK WILSON, M. D., of Muscogee county, Ga.

In writing an article designed to invite attention to the varied applications of waters—the numerous indications it is so well calculated to fulfil—its great, and in many cases, transcendent remedial virtues, we trust that our antecedents will be sufficient to relieve us from the charge of “giving aid and comfort” to a class of modern pseudo-reformers, who claim for this agent exclusive, universal, and almost omnipotent powers. And in order to remind regular physicians that they may speak and write of the remedial application of water, and use it too, *ad libitum*, in all its forms—solid, fluid, or gaseous; at all temperatures—hot, cold, tepid, or warm; to every part, generally or locally; in every way—by aspersion, by affusion, by submersion, by detersion and perfusion; by wet sheets or shirts, cloths, blankets, or *rags*, without justly subjecting themselves to the humiliating imputation of being misled by the New Lights, we will give a very brief history of bathing, which will show that water has been used in most or all these forms, from the most remote antiquity, and sanctioned by the greatest medical writers of ancient and modern times.

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*History of Bathing.*

As it would be foreign to our purpose to dwell on the remedial and religious uses of water, by the Hebrews, Egyptians, Greeks, and Romans, we will only remark that it has thus been used by all nations, in all ages, and by all denominations—Jewish, Christian, Mahometan, and Pagan. We will now briefly refer to some of the ancient medical authors who advocate the use of “Nature’s own remedy,” of which we hear so much in these modern days. Hippocrates recommended bathing in pneumonia; and cold affusions in inflamed joints, in gout and rheumatism, and in spasms, dislocations and fractures. Galen says: “Cold water quickens the action of the bowels; cold drink stops hemorrhages, and sometimes brings back heat; cold drinks are good in continued and ardent fevers—they discharge the redundant and peccant humors by stool, by vomiting, or by sweat.” He also commends the internal and external use of water, warm and cold, in biliousness, spasms, headache, fever of the stomach, hiccough, cholera morbus, ophthalmia, and plethora. Celsus directs bathing in affections of the head, in fulness of the stomach, weak vision, deafness, tremors, sinking, pains in the joints, diarrhoea, piles, hysteria, hypochondriasis, low fevers, digestive disorders, diseased kidneys, skin diseases, and hydrophobia. In addition to this strong testimony from the “fathers” in medicine, we can only mention, among the ancients, the names of Asclepiades, Oribassius, Aëtius, Rhazes, and Avicenna; and among the moderns, the names of Hoffman, Boerhaave, Haller, Floyer, Gregory, Cheyne, Lanzani, Harvey, Ambrose Pare, Larry, Macartney, Percy, Wright, Currie, Jackson, Forbes, and John Bell; and we might add the names of Sir Charles Scudamore, Drs. Johnson, Adair and Crawford, Mr. Mayo, Mr. Courtney, and the celebrated Liebig, several of whom have gone so far as to give their sanction to the “Water-cure processes.

But it may be said by our modern reformers, this is all true; the external and internal use of water has been recommended by all the most distinguished physicians in the world, ancient and modern, in every variety of disease; yet the immortal Priessnitz certainly *did* discover the wet sheet. We will see.

“Dr. Cole gives an account of a stout young man in a delirium, who, escaping from his nurse, ran into a pond, where, standing up to his chin, he swore he would drown who ever came in after



him. At his own time he came out of the pond and sat for many hours in his wet shirt by the bed-side. A physician was sent for four miles distant, who found him, upon his arrival, still in his wet *sheet*, or shirt, pertinaciously refusing to go to bed until, as he said, 'he took a notion.' This man recovered kindly.

"Dr. Floyer, 150 years ago, tells us that the people of Staffordshire, England, go into the water in their shirts, and when they come out they dress themselves over their *wet linen*, which they wear all day, and much commend."\*

But be this as it may, whether the idea of the wet-sheet pack originated with Priessnitz or not, it is doubtless a very valuable and convenient application, and we should not fail to avail ourselves of it, or any of the "water-cure processes," because they may have been abused and over-rated by a set of empirical hydro-maniacs: on the contrary, guided by a Catholic spirit of scientific eclecticism, we should, without hesitation, levy contributions from every quarter, remembering always that the difference between the scientific physician and the quack consists, not so much in the *remedy* used, as in the *mode* of using it.

Having shown that Hydropathy (like Thompsonianism) has nothing really new about it, except its extravagant pretensions, we will next adduce some theoretical considerations as an essential preliminary to a rational exposition of the therapeutic application of water. For the sake of brevity and perspicuity, we will present this part of our subject in an aphoristic form, promising that we shall advance nothing but axiomatic truths, or facts well established by the researches of Liebig and other modern chemists and physiologists.

*Physiological, Pathological, and Therapeutic Aphorisms.*

APHORISM I. Animal life, in its ultimate analysis, is nothing more nor less than a continued *transformation* of matter—an uninterrupted decay and restoration of the body—the ceaseless operations of two opposing processes of supply and waste—of decomposition and recomposition—of vital and chemical affinity.

APH. II. These two grand processes comprise the functions of digestion, absorption, circulation, assimilation, respiration, and excretion.

APH. III. The above transformations and functions are render-

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\* Prof. Bowling, in Nashville Journal, Jan. 1854.

ed more active by exercise, and by cold, through the agency of the *Vis Medicatrix Naturæ*, in her efforts to maintain an uniform standard of temperature.

APH. IV. The *direct* effect of water, of a lower temperature than the human body, is sedative.

APH. V. In its *indirect* or re-active effect, it is stimulant; and it possesses in addition the following properties, according to temperature and mode of administration, viz: Refrigerant, anodyne, derivative, diaphoretic, diuretic, anti-spasmodic, astringent, (counter irritant) and tonic.

APH. VI. The first impression produced by the application of cold water to the surface is, a vivid shock to the nervous system, with a simultaneous repulsion of the fluids upon the internal organs. The second effect (the result of the conservative powers of the organism,) is RE-ACTION, attended with a strong determination to the superficial cutaneous vessels, and perhaps to the capillary vessels of every part of the system.

APH. VII. Derangement or impairment of the NERVOUS POWER is the primary link in the chain of morbid action.

APH. VIII. Derangement of the CAPILLARY SYSTEM of vessels—the organs of chemical and vital transformations—(Aph. I.) is the second link in the chain of diseased action.

APH. IX. As a general rule, decidedly cold water should not be used on the surface of the body, in active internal inflammations, and high fevers; or in acute diseases generally, unless it could be *continuously* applied so as to avoid injurious re-action.

APH. X. The degree of re-action, after the cold bath is, in general, *cæteris paribus*, proportioned to the coldness of the water—to the suddenness and force of the immersion—to the vigor of the circulation in general, and more particularly that of the surface—to the muscular movements *in* the bath—to the friction and exercise *after* the bath; and, finally, within certain limits, to the period of stay in it.

APH. XI. The cold bath is not *positively* contra-indicated in acute internal inflammations; on the contrary, its use in such cases is correct, according to the *modus operandi* of the remedy; the objection to it being the practical difficulty of keeping up uninterrupted sedation. (Aph. IX.) Hence the following corollary, which demands our special attention, viz: *Most of our medical writers, confounding the effects of water of different temperatures, or being mis-*

led by theoretical fears, are over cautious and restrictive in its use. The terms hot, cold, warm, &c., being entirely relative and not absolute, great confusion and misapprehension are almost inevitable, in estimating the effects of different kinds of baths. We will, therefore, in discussing this subject, venture to make the following innovation in our present nomenclature, which we think will obviate, to some extent, this difficulty. We will call all baths which act *primarily as stimulants* to the general system—all bath *above the active or relative* temperature of the body, *plus* baths; while all baths of *primary sedative* action—all baths *below the actual or relative* temperature of the body, will be designated as *minus* baths; or, to be more specific—all baths above 98°, or above any other number of degrees to which the body may be accidentally elevated—all caloric baths will be comprehended under the former division; and all baths positively or relatively lower than the above points, will be classed under the latter head; while at the same time, the terms in ordinary use may be prefixed, or affixed, as convenience may dictate.

Dr. Forbes, in his very comprehensive article in the Cyclopædia of Practical Medicine, has fallen into the difficulties above mentioned, if we are not much mistaken; and as he may be considered a fair expositor and representative of the views of the profession generally, his article on "Bathing" will receive special attention.

He tells us, first, that the cold bath (33° to 60° according to his division,) is less applicable in infancy and old age, than in youth and middle life. This may be true as a general rule, still we are fully satisfied that it may be safely and beneficially used in tender infancy, and in trembling senility; and even in great general debility of all kinds, *if the temperature of the water be duly proportioned to the re-active powers*, and if the proper means (Aph. X.) be used to ensure vigorous re-action. His second contra-indications to the cold bath are menstruation and pregnancy; in the former positive, and to be used with great caution in the latter. The objections to the use of very cold baths during menstruation are no doubt well founded, still we think it possible, on theoretical grounds, that minus cool, or even cold baths might be resorted to with safety and advantage in some forms of dismenorrhœa and menorrhagia. As to pregnancy, although all violent perturbing remedies are inadmissible, we cannot see why this state should,



in itself, be a contra-indication to the judicious use of the cold bath, either generally or locally. Our author, in speaking of the warm bath, says: "It may be stated generally that pregnancy, in relation to the warm bath, is to be viewed as a state of excitement, if not as an inflammatory disease. Admitting this to be true, certainly nothing would more safely and effectually subdue the nervous and vascular excitement incident to pregnancy, than the local and general use of minus cool, or even cold baths of the higher temperatures; by the abstraction of excessive heat; by equalizing the circulation; by removing internal congestions; by corroborating the whole system; and thus preparing it to furnish suitable elements for the development of the new being, and to pass safely through the critical period of parturition. In short, we think that this is one of the cases in which regular physicians might, with much advantage to their patients, disregard the suggestions of pride and false theories, and follow the example of the Hydropaths, who use their wet bandages, general and sitz-baths, in the cases under consideration, not only with safety, but with great reputed success. And while on this subject, we would apply the above remarks to the treatment of women after parturition. All physicians agree in the use of cold applications in post-parturient uterine hemorrhage; and we are convinced that all the more reflecting are fully satisfied that the popular fear of "catching cold," so prevalent, is unfounded. They are also taught by daily experience and observation, that the throes of parturition leave the system in an irritated and excited condition bordering on fever, which constitutes a strong pre-disposition to inflammatory disease. This being true, then, could anything be more safe, more agreeable, and more prophylactic than a general tepid, or even a cold ablution soon after delivery? Far be it from us to advocate the rash and indiscriminate practice of many empirics of the present day; but in order to show that cold water is not so dangerous in childbed, as some imagine, we will give the practice of the Hydropaths in such cases. As soon as the child is born, a pint or more of water is thrown up the vagina, which they say (with reason too,) causes the womb to contract immediately, and prevents after-pains. The patient is then washed all over in cold water, and a cold wet bandage is placed around the abdomen. When the patient awakes she goes into a cold sitz-bath fifteen minutes, the wet bandage is re-applied and continued a month, together

with two sitz-baths, and three vaginal injections, daily. We must say that we consider this rather too much of a good thing, yet it serves to sustain us in the position we have taken, and should go far to encourage and confirm physicians in the judicious and scientific use of cold water, even within the very domain of ignorance, prejudice, and oldwomandom—the lying-in-chamber.

Dr. Forbes' third contra-indication embraces—great plethora; a predisposition to active hemorrhages; to local congestions in the more important viscera; in apoplectic subjects, and in tendency to hæmoptysis, &c. As the plethoric contra-indication will be discussed under the head of the warm bath, we will only remark here, that the wet-sheet pack (which combines the stimulant and sedative effects of cold water,) is highly recommended by the Hydropaths in such a condition.

The action of cold in hemorrhages and in internal congestions will now engage our attention. If we are correct in our views with regard to the action of cold water; if it be a direct sedative and refrigerant; and if (as is admitted by Dr. Forbes and others,) parts not in contact with a refrigerating medium, contract through sympathy, *then* is the local, *continuous* (Aph. IX.) sedative application of this remedy *strongly* indicated in *active* hemorrhages of all kinds, hæmoptysis not excepted; the only cautions necessary being, *to avoid carrying sedation too far, and yet to keep it up continuously, so as to prevent re-action*. In passive hemorrhages, the same potent agent is at our service still; but in cases of this kind, *its stimulant, re-active, derivative, and equalizing effects are desired: it should therefore be briefly and suddenly applied; while all the means already indicated as proper to ensure these results should be duly regarded*. (Aph. X.)

As to the local congestion of internal viscera, we must be permitted to say that we could not possibly imagine anything better calculated to remove these congestions than the stimulant and derivative action of cold water properly adapted, in temperature, to the re-active powers of the system, and regulated according to the principles already annunciated. And we will add, even at the risk of being considered heterodox, that we know of nothing better suited to fulfil these indications, in the cases in question, and in passive hemorrhages, hæmoptysis included, than the wet-sheet pack. Passing the fourth division of contra-indications, which does not require special attention, we will give the fifth

verbatim: "It is generally inadmissible (the cold bath) in indurations, obstructions, or chronic inflammations of the internal parts of the body, more particularly of the principal viscera; likewise in all acute inflammations of the same parts, and also in chronic inflammations of the mucous membranes of the bronchi and intestinal canal, except when these are very slight." Our views as to the principles which should govern us in the treatment of acute diseases, with cold water, having been sufficiently indicated, (Aph. IX. and XI.) we pass on to the consideration of one of the most interesting subjects within the whole domain of therapeutics, namely, its application in chronic diseases. This is a theme of extraordinary interest, on account of the well known obstinacy of such affections, their extensive prevalence, the inefficiency of our ordinary remedies in their treatment, and because, in our opinion our orthodox dogmas on this subject, need a thorough and radical revision. While it is admitted, even by the ultra Hydropaths, that cold water is not so useful in organic, as in functional diseases, we must dissent from the conclusion of Dr. Forbes, that "it is generally inadmissible in indurations, obstructions, or chronic inflammations of internal parts," for the following reasons:—In chronic diseases, generally, there is a want of proper activity in all the organic processes; all the powers of life are below par, and consequently all the functions are more or less tardily and imperfectly performed; and this is true equally of the diseased organ itself, for though there may be a determination of blood to the affected part, this is rather a morbid than a vital stimulant, for it flows languidly through the hyperæmic vessels of the suffering organ, and producing in short, all the pathological phenomena characteristic of passive congestion, rather than of active inflammation. If these premises be admitted, *then* are the stimulant and re-active effects (Aph. V.) of the cold bath *most desirable* in almost every form of chronic disease—to derive to the surface, to equalize the circulation, to eliminate morbid matters, to arouse the excretories, to quicken the chemical and vital processes of the capillary circulation, (Aph. I. and VIII.) to send the vivifying current through the stagnating vessels of the affected organ with a healthy impulse; and in short, to re-animate the sluggish powers of the whole organism. We will even go farther than this, and say, if the premises be true, then the more chronic the disease, the more permanent the inflammation; the greater the congestion or obstruc-



tion, the colder should be the water: provided always, that all the attendant circumstances of the case receive proper consideration; and provided everything necessary be done to ensure vigorous re-action.—(Aph. X.) The above observations are applicable to chronic diseases generally; and *a fortiori*, to chronic inflammations of the gastro-intestinal and pulmonary mucous membranes, because of the well known sympathy existing between those membranes and the skin. Yet while this intimate sympathy tends to strengthen the indication for the cold bath, it at the same time requires corresponding caution in using this remedy; and this is the reason, no doubt, why it has been deemed wholly inadmissible in inflammations of the chest, by Dr. Bache, (U. S. Dispens.) and almost all regular physicians; while the same consideration, doubtless, induced Dr. Forbes to restrict its use only to “very slight” chronic inflammations of the intestinal and pulmonary mucous membrane. From this we draw the following practical deduction, viz: While cold water is not by any means inadmissible, either locally or generally, in the affections under consideration, it will, as a general rule, be safer and equally as effectual to use it in accordance with the principles which would govern us in the treatment of acute diseases; (Aph. IX.) for *cæteris paribus* a higher temperature will produce as great an effect in these affections, as a lower would in other diseases. We have thus given our views on the use of the cold bath in several morbid conditions, and endeavoured to establish correct principles for its administration; we have felt much diffidence in expressing opinions adverse to the most authoritative writers in our profession, but we are prompted to the disagreeable task, by the firm conviction, that the doctrines advocated (although to some extent theoretical,) will bear the test of the most rigid examination. We proceed next to another form of bath, concerning which greater errors are entertained, if possible, than those we have first been discussing.

#### *The Warm Bath.*

It has been seen that this bath, according to our division, in its primary, and we might say in its exclusive effects, is a minus or sedative bath; being lower than the normal temperature of the body, its action is identical with the *sedative* action of the cold bath, differing in *degree* only from the latter, and not in *kind*: yet, with this important difference—*there being little or no reaction or*

*shock to perplex us in investigating its modus operandi—its phenomena are less complex and more easily understood.* This is undoubtedly a correct view of the subject; yet, as strange as it may appear, Drs. Bache, Forbes, and indeed most of our medical writers, while they prescribe the warm bath in diseases of excitement, nevertheless trammel its use with cautions, restrictions, and contra-indications, which plainly show that they have confounded the effects of the hot and warm bath. The former writer says: "the warm bath cannot be deemed, strictly speaking, a stimulant." And he tells us again, that it has a soothing influence in certain states of morbid irritability; and that it is proper in febrile and exanthematous diseases in which the pulse is frequent and the skin hot and dry. Yet—"it is contra-indicated in diseases of the head and chest," according to Dr. Bache. (U. S. Dispens., 115.)

Now, the fact is the warm bath is not in any sense a stimulant, as we might be led to believe from the cautious language of this writer: for though, as he says, its temperature may be above that of the *surface* communicating to it a sensation of warmth, it is nevertheless below the normal standard of animal heat; it abstracts caloric, soothes the nervous system, allays vascular excitement, restores the equilibrium of the circulation, and is, therefore, "*strictly speaking*," a minus or sedative bath—and *nothing else*. And yet, notwithstanding all this, we are told that it is contra-indicated in diseases of the head and chest: in inflammatory diseases of these parts, we presume. But with what propriety such declarations are made we cannot possibly see, for we cannot imagine any way in which the warm bath could act injuriously, in such cases, unless it were by the retro-pulsion of the fluids, by the density of the medium surrounding the body; but, admitting the possibility of this, we think that this result would be fully counteracted by the increased capacity of the cutaneous vessels, in accordance with well known physical laws. And apart from all theory, we feel confident that we may safely appeal to the experience of every physician to answer the question as to whether he has ever seen any injurious effects from the warm bath, in the diseases under consideration, when the temperature of the water and all the attendant circumstances of the case were duly regarded in its administration.

The position we have taken is so rational and obvious that it would appear to be a work of supererogation to multiply argu-

ments in its support, were it not that our most authoritative writers, our preceptors in theory and our guides in practice, advocate adverse (and we must say erroneous) views on this vitally important practical point. For instance, the author to whom we have already given so much attention, (Dr. Forbes,) prescribes the warm bath (92° to 98°) in chronic nervous diseases of a spasmodic kind; in cramps, spasms, and convulsions of various kinds, *unaccompanied by a plethoric state of the system, or by fever*. He prescribes it also in various painful nervous and spasmodic affections, such as neuralgia, sciatica, &c., *in spare habits, and without inflammation*; also, in acute inflammations of the mucous membranes of the abdominal and pelvic viscera, with the loss of blood generally and locally, in all cases, or with very rare exceptions, *in order to render the bath a useful, or even a safe remedy*. With these precautions it may be useful, *if not contra-indicated by plethora, &c.* Similar directions are given as to the use of the warm bath in chronic inflammations of the same parts. And lastly, he informs us that it has been used, more particularly on the continent, in the cold stages of severe fevers, and in the retrocession of cutaneous diseases. Certainly rather a strange remedy, according to our ideas, unless the temperature of the bath was *above* that of the body.

We have italicised some of the contra-indications made by him in prescribing this remedy; and we find by glancing over his article, that five, out of the nine indications, contain cautions and restrictions plainly showing that he considers the warm bath a dangerous stimulant and excitant. He positively contra-indicates it, or enjoins great caution in its use—in full habits, in plethora, in predisposition to apoplexy and hemorrhage, in organic diseases of the heart, in great relaxation of the system, in extreme sensitiveness of the surface, and “*in all febrile diseases, whether accompanied by visceral inflammation or not, where there is an active circulation and a hot dry skin.*” (Cyclo. Prac. Med., p. 277–279.)

As we remarked, when treating of the cold bath, we feel great diffidence in opposing the views of one so distinguished as Dr. Forbes; yet we must be permitted to say, that we can see but one proper contra-indication in all the above list, and that is in cases of “great relaxation.”

And we must say, in conclusion, that we cannot expect physicians to realize the extraordinary benefits to be derived from the warm bath, or to use it judiciously, when they follow, without



investigation, the dicta of writers who make an "active circulation and a hot, dry skin," a positive contra-indication to it.

*The Temperate, Tepid, Vapor, and Hot Baths.*

As the cold and warm baths are the terminal and governing links in the chain of minus or sedative applications, and as the general principles established in reference to them may be readily applied to all the intermediate links of the same chain, above mentioned—as these differ in *degree* of action, and not in *kind* of action, from the warm and cold baths, it will be unnecessary to enter into any general discussion as to their *modus operandi*: we will only remark, then, that any peculiarity in the action of each, and particularly of the vapor bath, will be noticed when treating of specific diseases. The effects of the hot bath being obvious and well understood, it is equally unnecessary to multiply remarks concerning it.

But the length of our article warns us that we must here dismiss this interesting subject, for the present; we will therefore defer, to some future time, that part of our "Essay" which we intended to devote to *special* Hydro-therapeutics, or the practical application of the principles advocated to specific diseases. In the mean time, we trust that our humble effort will tend to the establishment of more definite and philosophic views as to the *modus operandi* of the agent we have been considering; and we hope that physicians will remember, amid the intricate mazes of fallacious theories, and the uncertainties of a redundant *Materia Medica*, that Nature has provided in the greatest profusion, a remedy of wonderful, varied, manifest, and in many cases, transcendent remedial powers IN PURE SIMPLE WATER.

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ARTICLE XXVI.

*Treatment of Pneumonia.* By C. C. HOWARD, Lowndesboro', Ala.

The attention of the profession has been prominently directed, for the last few years, to the treatment of pneumonia; and, inasmuch, as I have some reason to be satisfied with the plan pursued by myself, it is here briefly given.

The treatment of nearly every case of this disease, coming under my management, is begun and continued with calomel, quinine

and ipecac, aided by other remedies to be hereafter mentioned. These medicines are usually commenced with in combination in something like the following proportions for an adult:

R Calomel, grs. xvj.

Quinine, grs. xxiv.

Ipecac, grs. iv. Divide into eight powders.

One to be taken every three hours until the bowels are moved two or three times. Should these medicines fail to operate in twenty-four hours from the time of commencing to administer them, give oleum ricini,  $\frac{3}{4}$ ss, or a seidlitz powder, or some other simple cathartic; and, if necessary, in two or three hours thereafter, enemata.

It will frequently happen, however, that the patient will have taken a cathartic before the physician is called, then the calomel should be given in smaller doses, with a view to its specific action only; for, although a soluble condition of the bowels is desirable throughout the attack, *purgation* is to be avoided.

According to the writer's observation, a great majority of patients will be brought under the peculiar influence of *quinine*, in from twelve to twenty-four hours, if the medicine be administered in doses of two or three grains, every two or three hours. But in the more violent cases of the disease, I occasionally give five grains, at intervals of three or four hours. A little experience with still larger doses of this drug, i. e. ten or twenty grains, has fully satisfied me that in *any* of the diseases I am called to treat, (provided there is time to repeat the smaller doses,) there is no necessity for the very large quantities of this medicine sanctioned and recommended by some others.

As has been already indicated, the calomel is given with a view to its cathartic or constitutional effect, or both; the quinine and ipecac with a view to their action especially on the nervous system and skin. In the course of the treatment, therefore, one or another of these medicines may be left out, or the whole suspended for a time, as the effect and existing symptoms dictate.

Warm poultices, powdered with a little mustard, if there is much pain, are to be applied over the diseased lung or lungs.

If the fever has not subsided by the second day's visit, the pain greatly decreased, and the patient improved generally, I apply a blister sufficiently large to cover the entire thoracic disease. Indeed, the maxim with me is, in every case of pneumonia when

the inflammation is such as to make a blister *tolerable*, or when there is the probability that a blister will be required in the treatment at all, to apply it without delay, and re-apply it if necessary, that is to say, if the disease does not give way during the continuance of the first vesication.

The calomel, quinine and ipecac, generally act well as an expectorant, and some cases are treated without any other; but frequently something like the brown mixture (U. S. Ph.) is given, preferring, however, flax-seed to the gum arabic, less liquorice, with some sugar, and in most cases wine of ipecac, to the antimonial wine. The flax-seed are decidedly preferable to the gum arabic, probably on account of the oil they contain. Indeed, oily substances generally will allay cough, and I suspect cod-liver oil owes much of its efficacy in lung disease (if it has much,) to its oily nature. Latterly, I have frequently used the following oil mixture as an expectorant, and have been much pleased with its action :

R. Ol. ricini, . . . . ʒss.

Tr. opii., . . . . 3i.

Loaf Sugar, . . . . 3ij.

Gum arabic, . . . . 3i.

Aq. pip. ment., . . ʒvss. M. secundum artem.

One tablespoonful every one, two, or four hours, as occasion requires.

If the patient has thirst he may allay it with water, which it is submitted is the most reasonable, natural, efficient and satisfactory means. When he wishes nourishment, the direction is to give him a little plain food, nicely prepared. Here let it be said, out upon those heathenish preparations of arrow-root, sago, tapioca, pulv. elm, barley, beef tea, and a hundred vile dietic compounds which ninety-nine cooks out of a hundred know nothing about, and which no sane man would ever select as food for himself in health.

Though expressed somewhat in detail, such is the general plan of treatment pursued for several years, with some success, by the writer, and which he desires to recommend to those of his brethren, especially in the malarial districts of the South, who are dissatisfied with the result of the methods of treatment they now pursue. It may be added that, by a judicious application of these means the symptoms resulting from the nervous disturbance



will be removed; the skin induced to act healthily; the bowels with the viscera of the abdomen brought to the performance of their natural functions; the cough kept in due bounds; the inflammation subdued; the strength reasonably sustained, and the patient very satisfactorily cured. Usually, no other remedies have been found necessary to conduct my cases to a favorable issue. When these, however, have failed promptly to promise success, (as has occasionally happened,) then others have been selected and applied on general principles.

"But do you never bleed your pneumonia patients?" I have not bled one in several years, but should not hesitate to do so if the grade of fever accompanying the disease was synochal; but hereabouts it is nearly constantly of a lower or typhoid type.

"Don't you give aconite and phosphorus?" Never a drop—never saw but one patient who took them, and he died in two or three days with his pneumonia, marked by head symptoms, the result, however, I believed, of morphine with which the aconite and phosphorus had been aided. Hence it may be said that although opiates have been brought into the treatment suggested in this paper, still it has been found necessary to observe caution in their use; even teaspoonful doses of paregoric were observed to produce decided effects in cases occurring in adults on the same plantation.

But what of the *veratrum viride*? I have seen a little of the action of this medicine and consider it, both from what has been seen and from its prominent impression on the system, as insufficient to the cure of this and most other diseases; and with due respect for its introducer and approvers, venture to assert that it has received its crown, which time and future experience will greatly fade.

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ARTICLE XXVII.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.  
LETTER NO. 15.

MONTGOMERY, ALA., August 28th, 1856.

*Messrs. Editors*—It is not so strange a matter, that derangement in the functions of the liver should constitute an important feature in the character of these, and indeed, of all other fevers in our climate, if we examine into the causes which tend to interrupt the

secretion of bile, and to suspend its other important functions; as it is, that there should be in the present day, eminent men in the profession, who *affect* to believe that disordered functions of the liver constitute no very important or essential part in their character. How they have arrived at such a conclusion can be imagined, only by supposing, that while the scalpel and dissecting knife has failed to reveal the work of inflammation, upon which they supposed the malignant forms of these fevers to depend, they have overlooked the important fact, that nineteen-twentieths of the deaths which occur from these diseases, are the direct result of *functional disorder*, consequent upon *nervous depression*, or a *change in the healthy constitution of the blood*, with which inflammation has no necessary connection. Or it may be that they have looked at them through glasses, adapted to the *focus* of popular prejudice against *certain remedies*, which, *Old Fogyism* was once simple enough to believe, had power to regulate their disturbances. However that may be, we will first notice some of the prominent causes which give rise to disturbance in the functions of the liver, and then show the consequences which result from such disturbance in connection with these (intermittent and remittent), and other fevers in our climate, and I design to be as brief as possible.

The functions of the liver may be deranged and suspended from a *loss of power* in the secreting vessels, or from excess of excitability and irritation in the vessels of the liver. It may depend upon an excess or a deficient quantity of blood, upon its too slow or too rapid movement, and upon the character or constitution of the blood itself, as when, from excessive secretion and a loss of its thin or watery constituents, it becomes too thick for easy circulation; or when, from a loss of its solid constituents, it becomes too thin and too much impoverished to sustain the functions of secretion, or even its own vitality. The most common source of deranged and suspended functions of the liver is to be found in *venous congestion*, consequent upon an enfeebled condition of the capillaries of the portal vein, and usually attended with engorgement of the *bile ducts*, with thick inspissated bile, while its deranged and suspended functions, from excess of excitability or *irritation* in those vessels, depend neither upon venous congestion or bilious engorgement, though these conditions often attend upon it—the former being the usual attendants upon the congestion, and the latter upon the irritant and inflammatory forms of fever. Now, the dis-

turbance in the functions of the liver, which consists in an excessive or defective secretion of bile, in defective or suspended elaboration of the nutritive materials brought to it by the portal veins, and in the defective or suspended depuration of blood consequent upon these, may, with the causes which give rise to it, be regarded as a chain of cause and effect, having the *first* link in such a loss of nervous power in particular parts, or of the whole system, as to interrupt and disturb the circulation and to cause an unequal distribution of blood, whereby it accumulates in certain organs and becomes so deficient in others, as seriously to interrupt the healthy performance of their functions, some of which, are employed in the office of supplying material to the blood for the support of the system, while others are employed in removing from the blood the noxious and septic matters which are the natural product of disintegration and decay. The particular constitution of the blood most favorable for an excessive secretion of bile is not an easy matter to determine; but the general condition of the system which appears most favorable is a *moderate* degree of excitement, such as exists in the ordinary *irritant* forms of disease, the conditions of *depression* and *congestion* and of *high excitement* or *inflammation*, being alike unfavorable. In speaking of the excessive secretion of bile, I do not mean such a normal increase as often occurs under the influence of temporary and partial excitement, but when it occurs as one of the morbid phenomena usually attendant upon particular forms of the fevers under consideration, the effects of which are to excite excessive and obstinate vomiting and purging, (the bile, itself, being under such circumstances acrid and irritating,) and thus to interrupt or suspend the process of digestion, assimilation and nutrition. Another effect of the excessive secretion of bile is to weaken the secretory powers of the liver, and thus to render it subsequently torpid and inactive; but the most important effects of excessive secretion, in a pathological view, are those which relate to the changes thus effected upon the constitution of the blood; and for the better illustration of my views upon this subject, I will offer a few extracts from Dr. Williams' Principles of Medicine: "Excessive secretions, if abounding in animal matter, may not only reduce the mass of the blood, but also affect its composition." "Urine contains a great preponderance of azote, and its excessive formation from the principles of the blood would have a predominance of hydrogen and carbon in



this fluid. The bile again abounds in hydro-carbon, the copious removal of which would leave a superfluity of azote. . . . . The secretions of the liver and of the kidneys are intended to balance one another, and the removal of carbon from the lungs, and whether the materials from which these eliminating processes are supplied, be the principles of the blood itself, or the decayed constituents of tissues, or matters derived from the food, the co-operation of all these processes will generally be required to maintain an uniformity in the composition of the circulating fluid: so, too, if one of these processes is more active than the others, the blood must suffer by the excess of those matters which the less active processes allow to accumulate in it."

We come next to consider the effects of a deficient or suspended secretion of bile, which being an important agent in the work of digestion, its deficiency necessarily enfeebles that process, and impairs the function of assimilation and nutrition. Thus, the blood to an extent becomes impoverished, which tends to diminish the tone and vigor of the whole system. Another effect of a deficient secretion of bile is to interrupt the regular peristaltic action of the intestines, which to some extent depends upon the stimulus of the bile, but being deficient in quantity gives rise to torpor of the bowels, whereby the excrementitious matters are retained for too long a time, subjected to the action of the absorbents, and thus effete and noxious matters which ought to be thrown off, are taken again into the circulation along with the new materials of supply, which the liver in its deranged condition fails properly to elaborate, and which in their unprepared state are thrown into the general circulation, thus further impairing the healthy constitution of the blood and unfitting it for the proper and healthy performance of its various and respective offices. But by far the most important effect of the suspended secretory function of the liver is, the retention and accumulation in the blood of the elementary principles for secretion, and the effete, septic and noxious matters of excretion, which are the product of disintegration and decay, whereby from a want of depuration the blood often becomes so depraved as not only to be unfit for sustaining the vital functions in their integrity, which depend upon its healthy constitution, but to exert a direct influence in the establishment of a still greater depravity, by depressing the power of the great nervous centres; and thus, the liver, lungs, kidneys, &c., failing further in their work of elimin-

ation and depuration, the blood, in a great measure, loses its vitality, giving rise to those malignant symptoms which are characteristic of the highest grades, or most malignant forms of the fevers of hot climates. To show that these remarks are not mere assumption, I will quote again from Dr. Williams, who says—"The concomitance of congestion with defective secretion, in the case of the liver, the kidneys and the mucous membrane, is well known, but either may be viewed in the light of both cause and effect. The most remarkable of the *backward* effects of defective secretion are instanced in case of the secretions (before treated of). The distinctive materials of the secretions of urine and bile appear to be *positively noxious, and poison the system if not separated from the blood*. Thus, the sudden suppression of urine or bile causes typhoid symptoms, extreme depression, and coma, which speedily end in death; and in such cases urea, or the coloring matter of the bile has been found in various organs. Where the suppression is incomplete, the *poisoning process* is more tardy: various functional and visceral derangements are produced, such as delirium or lethargy, dyspnoea, palpitation, vomiting, diarrhoea, dropsical effusions, structural degenerations, &c., *which always proved fatal sooner or later, if the defective excretion be not restored*." Again—"The *positively noxious* properties which excrementitious matter retained in the blood is known to possess, must be taken into account when we attempt to explain the states of constitutional irritation and depression with perversion of functions, which fevers so generally present." Dr. W. continues his remarks concerning the effects of defective secretions, to which I find a note appended, which conveys my ideas so fully, respecting *a condition* frequently to be seen in some of our more malignant forms of fever, particularly the typhoid, that though somewhat out of place, I cannot let it pass:—"Purpura, I have found to be often connected with hepatic congestion, and imperfect excretion of bile, and to be most effectually removed by remedies which promote the restoration of the proper secretions."

I propose now, (and there can be no more appropriate occasion,) to examine the relation which these derangements in the functions of the liver sustains in the different forms and modifications of those fevers, which have their origin in a change of the organic nerve power, to which class we consider the fevers in question (intermittents and remittents) to belong, taking, first, those which

are characterized by nervous depression and congestion, (according to our classification,) and secondly, those characterised by excitement with irritation or inflammation, and lastly, those which approach to, and assimilate the typhoid character. I have already pointed out the manner in which general causes, acting with unequal force upon different portions of the nervous system, increasing or diminishing the excitability of particular organs, thus deranging the currents and disturbing the balance between the venous and arterial portions of the circulation, causing determinations, and undue accumulations of blood, and thus interrupting the healthy performance of the functions of those organs, in consequence of which, the quality of the blood often becomes so changed as to effect further and important changes in the nerve power, and in some cases, and in some forms of these fevers to destroy, in a great measure, the vitality of the blood. But it must be remembered that the changes thus effected in the condition and quality of the blood, in the first named or congestive forms of fever, do not so much affect its vitality, as they do, for a time at least, and to a certain extent, destroy its properties as a stimulant to the nervous centres and important vital organs, such as the heart, lungs, &c., upon which their proper and healthy action depends. These changes, which consist chiefly in an accumulation of carbon, or the hydro-carbonaceous products in the blood, are usually effected in this form of fever, in the manner described by Dr. Williams, or upon the same principles, namely, that while the liver, from congestion or loss of power in the secreting vessels or both, fails to separate these products from the blood, heavy drafts are often made upon its albuminous and animal principles through the skin, kidneys and the intestinal mucous surfaces. Indeed, so uniformly is this the case, as to have induced the remark on a former occasion, that I had never met with a case of congestion and collapse which was not the result of some heavy draft upon the circulating fluids, or of some strong heavy epidemic influence. Hence it is, that when death ensues in this form of fever, it is from the loss or destruction of the organic nerve power, from a want of the stimulus of a sufficient quantity of oxygenized blood, and not from necræmia or loss of vitality in the blood, which often occurs in some of the more malignant forms of fever. It is thus, that thousands of cases of fever, pneumonia, and other diseases, not necessarily fatal in their character, have been brought to



a fatal termination from a rash and injudicious use of the lancet, emetics, cathartics, diuretics, and diaphoretics, all of which tend to destroy the nerve power, and none of them, under the circumstances, to restore the secretions of the liver. The rational indications for the treatment of all such cases are, to increase and sustain the nerve power, to arrest all excessive drains upon the circulating fluids, and to restore and maintain an equilibrium to the circulation, and last, though not least, to secure the secretory functions of the liver. The fulfilment of one of these indications will go a great way towards the fulfilment of the others, and the remediable means required will generally be few, simple and efficient, if properly applied. Keeping in view the trite adage, that "an ounce of prevention is worth a pound of cure," the periodic character of the disease can never, with *safety*, be overlooked. To increase the power of the nervous system, the *moderate* use of diffusible stimuli, such as ether, ammonia, camphor, opium, and brandy, will be found the best. As a simple stimulant, the brandy is generally to be preferred, but for the additional purpose of allaying irritation in the stomach and bowels, I have found camphor and opium, as they are combined in paregoric, to answer better than any other combination of these remedies; but to get their best effects the dose should be larger than that usually prescribed. I am in the habit of giving a tablespoonful, or half an ounce, and repeating it every hour or oftener, as long as there is a necessity for its use, and to children a proportionate dose. If the type of the disease is not *positively* known, it will be the safest practice to combine quinine with these remedies in proper doses, if the condition of the stomach is such as to retain it.

To restore a balance to the circulation, and to arouse the action of the remote capillaries, no means are so effectual as the steady and persistent application of *dry heat*. For this purpose, the patient should be confined to bed, be well invested with blankets, or bed-clothes, and surrounded with bottles filled with hot water. If, from the internal use of stimuli, and the external application of heat, a profuse perspiration should be induced before the evidences of reaction should be sufficiently manifest, it should be promptly arrested, as its continuance will have the effect of retarding, and *may* prevent reaction. This may readily be accomplished by removing the bottles and blankets, and sponging the *whole* body and limbs with *ice water*, which will, generally in a few minutes,

establish a reaction. If it fail, the blankets and bottles should be re-applied. In the meantime, and as soon as circumstances will admit, calomel in the dose of 25 or 30 grs. with 10 grs. of Dover's powder, should be administered; the best mode of administering which, is to rub it up with a little brown sugar, put into the mouth dry, and carried down with a swallow of water. If it should be thrown up, it should be immediately followed by an other dose of the same sort; or if the stomach should be irritable with vomiting, it will generally be the best plan to increase the dose to 35 or 40 grs. and make it into a bolus which will be easily swallowed, but difficult to throw up. This dose will generally operate in 8, 10, 12 or 15 hours, and sometimes longer, and generally the *longer* the *better*, for it will seldom fail to relieve the liver of its sanguineous and bilious engorgement and restore its secretions, and seldom requires to be repeated. That this is the most effective and safest manner of using calomel in this form of fevers, and in a like condition in other diseases, I am prepared from ample experience to testify. The liver having been thus relieved of its engorgement and congestion, the next important step is, to fortify the system against the recurrence of a similar condition of things, and this will be effected by bringing it under the influence of quinine, in anticipation of the period of depression according to the type of the disease, and its action may always be favorably assisted by confining the patient to the application of the blankets and bottles of hot water. In this manner the sweating may be substituted for the cold stage, and whenever this is done, and the secretory function of the liver is re-established, the victory will be complete.

The foregoing embraces all the principles of practice, with some slight modifications, (and most of the remedies, with the exception of some which served rather to add to the comfort of the patient,) with which I have successfully combated some of the most formidable congestive forms of disease, among which, besides the fevers under consideration, may be enumerated cholera, and dysentery, pneumonia, and other symptomatic fevers, some of which were of the most grave, and others of the most trivial character; among the latter was the case of a gentleman in this city, who laid eighteen hours in a state of collapse, or asphyxia, in consequence of excessive purging with Epsom salts for a common bile.

The next forms of these fevers which we shall notice are those

of the intermediate grades, as the *irritant*, *congesto-irritant*, and *congesto-inflammatory*. These are characterized by higher degrees of excitement, and generally have their type and periods of exacerbation well defined, whether intermittent or remittent. In these forms of fever, particularly the irritant and congesto-irritant, when the febrile movement becomes established, the lungs allow of such a free circulation as to furnish the nervous centres, and other vital organs, with an exuberance of oxygenized blood, giving life and activity to those organs which have not suffered from previous debility or depression, and giving rise to irritation in those which have. In these fevers, the liver being measurably freed from engorgement, and being excited by a supply of well oxygenized blood, pours out quantities of bile, which, finding its way into the stomach and bowels, gives rise to the bilious vomiting and purging which, with the delirium, and hot and moist skin and rapid pulse, are their characteristic symptoms.

The indications of treatment and the details of practice are somewhat different, in these fevers, from the congestive form, and as their tendency is to relapse into that form, when they do so, the principles of practice will be the same: they sometimes, too, spring up into inflammation, under which circumstances the practice must be modified accordingly. In these forms of fever, during the exacerbation, if the skin be hot and dry, as is often the case for a short time during its height, refrigerative drinks, and sponging the body with cold water, will generally be sufficient to reduce the excitement. Narcotic medicines and diffusible stimulants are generally required; but there is no disease, or form of fever, in which quinine is more required, or in which its best effects are more manifest, than in this dangerous form of fever, and should be used with reference both to its stimulant or antiperiodic and its tonic effects: it may, in fact, be regarded as the *sheet-anchor* in their treatment. Should there be (which is sometimes the case) engorgement of the liver, in consequence of a feeble and imperfect febrile reaction, calomel will be both necessary and proper; or if the flow of bile has been excessive, its use will generally be necessary, as torpor of the liver is apt to follow such action. In these cases, so large doses will not be required to affect the liver—20 gr. doses will generally be found sufficient; but if the stomach and bowels are much irritable, large doses will be found to act better, for reasons already given. If the secretion and flow of bile have



been excessive, the use of saline diaphoretics and diuretics will be proper, and necessary to carry off the excess of azotic compounds left in the blood, by the withdrawal of the hydro-carbon through the liver. If, as there is good reason to believe, the character of these fevers depend upon a loss of tone in the nervous system, with a too highly animalized condition of the blood, the rational indications of treatment would certainly be to raise the tone of the nervous system, and reduce the animal constituents of the blood. Upon these principles has our practice in such cases been founded; but in the use of remedies for fulfilling these indications, care must be taken not to excite too highly the circulation, by the use of stimuli, for fear of producing inflammation, nor to draw too heavily upon the circulating fluids, by bleeding or otherwise, for fear of producing debility, depression and congestion. These being the fevers in which, in *times past*, the *lancet*, *emetics*, and *drastic cathartics* have displayed their *prettiest* work of destruction.

The next form of these fevers which claims attention, having, like the preceding, their origin in a change of organic nerve power, are characterized by higher degrees of excitement, ranging from irritation to inflammation. These fevers, which are usually remittent in their character, are generally sustained or kept up by a greater amount of vigor and tonicity of the system, and a richer and denser constitution of the blood.

We have maintained that fever is a sanative effort of the system to overcome some obstruction, to relieve some laboring organ, to restore some suspended function, &c.; and we have advanced the opinion, that the liver was the seat of the origin of these fevers; and it now remains for us to examine the relations which the disordered functions of that organ sustains to the particular form of fever in question.

The torpor and inactivity of the liver, which we suppose, and know to exist in most fevers of this character, we have ascribed to the cause of long continued over-action, and this opinion is sustained, as well by the season or period when they mostly prevail, as by the character of the fever itself. The fact of their having slight cold stages, or stages of nervous depression, and prompt reaction, with a free pulmonary circulation, and a preponderance of blood upon the *left* side of the heart, manifested by a full, strong pulse and a hot, dry skin, which are characteristic features of this form of fever, are sufficient evidences of the general condition of

the nervous system, and that the blood is not so loaded with hydro-carbon as to cause nervous depression. From the long continued and excessive drain from the liver, which induces its debility, we might suppose that the azotic compounds would be left in excess in the blood; but the *skin*, if not the kidneys, (as these often perform vicarious offices for each other,) under the same influence as the liver, (atmospheric heat,) tends to preserve the proper condition of the blood, by throwing out the azote, while the liver is separating carbon. Though suspending secretions are among the characteristic symptoms of this fever, the termination of each paroxysm is usually attended with a restoration of some one or more of the secretions, generally the skin or kidneys, or both, and sometimes the liver; and thus the integrity of the blood is often preserved through many successive paroxysms.

Although I have ascribed the suspended or interrupted functions of the liver, among other causes, to excess of excitement, to which we must assign the suspension of other secretions in this fever; yet it does not follow that the suppression of the biliary secretion in these fevers depends upon that cause. The fact that this secretion is performed by venous capillaries, from venous blood, while other secretions are performed by arterial capillaries, from arterial blood: and the further fact, that the means employed to restore other secretions, by the reduction of excitement, has *little or no* effect in restoring the suspended secretions of the liver; but that it requires the action of a *specific excitement* to do it, may be taken as *prima facie* evidence that the liver is inactive and torpid, in these fevers, from debility. This, we believe—and it is an important matter to be kept in view—that using the proper means for the reduction of excitement, care must be taken that too heavy draughts be not made upon the blood, by bleeding, purging, sweating, &c., until other measures have been resorted to for the restoration of the biliary secretion, lest such an excess of carbon be left in the blood as to cause depression in the nervous centres. How often has it been the case, that for the want of this precaution, and acting under the belief that reduction of excitement was *the great* object to be obtained, patients having strength sufficient to sustain them through a series of paroxysms, have in this way been suddenly precipitated into states of extreme depression, congestion and collapse? Where there has been no such drains upon the circulation, and these fevers have pursued their course through

a succession of paroxysms, the consequence of the suspended secretions will be, such an accumulation of effete, noxious and septic matters in the blood as not only to depress the organic nervous power, but to prostrate the animal powers also, and to a considerable extent to destroy the *vital* properties of the blood itself, and giving rise to a train of typhoid symptoms, such as, a loss of muscular strength, a feeble pulse, low delirium, or coma, showing the poisonous influence of the blood upon the brain and other nervous centres; a dry, brown and cracked tongue; a sallow, icteric, or cadaverous appearance of the skin, with sudamina, petechiæ, hemorrhage, offensive excretions, &c.—showing, from the deranged condition and depraved character of the secretions and excretions, an evident tendency to putrescence of the fluids, from a loss of vitality in the blood. Hence it is, that it is not uncommon in localities where this form of fever prevails to find cases bearing a striking similarity to typhoid and yellow fever, in the low delirium, coma, sudamina, hemorrhage, jaundice, and even, in extreme cases, black vomit. But *similarity* must not be confounded with *identity*; and it must be remembered that this typhoid condition and necræmic state of the blood, in bilious fevers, are consequential upon deranged functions, the result of organic nervous depression, and of poisons *generated* in the system during their progress—while the fevers which they *assimilate* have their origin in causes or poisons which have been *generated out of the system*, and which, being taken into the circulation, tend from the first to destroy the vitality of the blood, and to prostrate the animal nervous power. The similarity between these fevers, which has given rise to the doctrine and arguments in support of their *essential identity*, belongs rather to their *termination* than to their *origin* and *progress*, in which my own observation has satisfied me that *they are essentially different*. As this subject will constitute the theme of my next letter, I will make a few therapeutic remarks, in addition to the suggestions which I have already made, and leave the subject to the reflection of the reader.

It seems almost a matter of supererogation to say, that the indications of treatment, in this form of fever, are to reduce the general excitement, and restore the secretions, by raising the tone and excitement in organs in which it is too low, and reducing it where it is too high, and thus preserve the integrity and vitality of the blood. Another equally important indication is, to arrest the



progress of the disease, by interrupting its periodicity by establishing a state of excitement in substitution for the stage of nervous depression. These indications will be best fulfilled by a judicious use of the lancet, and saline diaphoretics and diuretics; by calomel in full purgative doses; by opium, to allay pain and check excessive secretions; and by quinine, to break up their periodicity and arrest their progress. Local inflammations, either as cause or consequence, must be treated upon their own merits, but with respect to the general condition of the system. The treatment suited for the typhoid condition in these fevers will be noticed in another connection.

I have thus examined the character of *intermittent* and *remittent* fevers, according to the plan and classification which I at first proposed, which I think will *cover all the forms and varieties* (so far as their pathology is concerned) which have been noticed by European and American writers. It may be, that some of my readers may complain that I have given but a meagre account of these fevers, and a still more meagre plan of treatment. To such I will say, that it was never my purpose to enter into a minute detail of the causes, the symptoms, or the treatment of these diseases, but to consider them in the light of a general pathology, upon which their treatment was to be founded; and I regret it, if their expectations have been disappointed. It is my intention, however, to give, more minutely, the treatment in particular cases which I shall furnish in support, and in proof, of the principles which I advocate.

As ever, yours truly,

SAML. D. HOLT.

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*Lecture on Impotence.* By Prof. TROUSSEAU.

In considering, to-day, the subject of impotence, I design to submit for your examination a question as delicate as it is important. The disease about to be treated is but recently known; it may, whatever be its nature, present itself every day to the practitioner; you will therefore understand how necessary it is to have all possible information on this point, since for the patient it concerns an entire loss of health for years, and even death, and for the physician cruel misapprehension, or, on the other hand, the complete cure of a disease apparently unconquerable.

I shall, however, call things by their true names; the *exposé* of facts will be conceived as far as possible in irreproachable terms,

yet clinical instruction has its indelicate side, and I am speaking only to the professional, I will not disguise my ideas for the slender satisfaction of rendering my words a little more delicate.

A seminal loss is an involuntary flow of semen, a passing out sperm without any erotic provocation, or at least without *sufficient* erotic provocation. An individual has an excremental mass of a certain volume accumulated in the large intestine; he makes violent efforts to eject it, and finally succeeds in overcoming the resistance of the sphincter. This mass pressed on the prostrate and ejaculatory conduits, it bore considerably upon the seminal vesicles, and at the moment of its ejection, it caused an emission of sperm. This comes under the cognizance of pathology—for in the normal state, and even with those who are affected with obstinate constipation, these parts, by their elasticity, resist the difficult passage of hard feces, without producing any such result.

Another individual passes, in the first jet of urine, but especially with the last drops, a thick, glairy, viscous fluid, which adheres sometimes to the meatus urinarius; the consistence is characteristic, the odor *sui generis*, and microscopic observation reveals well formed and vivacious animalculæ. These are two examples of seminal flow without erotic provocation.

To produce ejaculation, there must be a previous act of greater or less duration; for however strong be the desire of a continent young man, there ensues no seminal evacuation even when he is near the person who excites the desire. Voluptuous handling of the penis, and lascivious caresses, may occasion seminal issue, but there is not in that case *sufficient* erotic provocation.

With men who are very reserved in the pleasures of love, nocturnal pollution, the ordinary result of lascivious dreams, are, when they occur at long intervals, and when they leave after them no great feeling of weakness or discomforting symptom, a sign of health and virile power, and not of feebleness or disease. But if they succeed rapidly, several times a week for instance; if the subject is left in a decided state of langor; if he has less ability for work; in short, if he presents to a certain degree the general symptoms which we are about to mention, health exists no longer, and disease has commenced. There also is there no sufficient erotic provocation.

On introducing the virile member into the female genital organs, some individuals ejaculate immediately, and very soon the erection ceases. Here again is an involuntary seminal flow, because there has not been due and sufficient excitement; the intromission of the penis ought to continue for a certain length of time. Whenever you know such a state of affairs, question and observe well the patient.

Of these spermal issues during micturition and defecation, what may be the consequences? Professor Lallemand, although somewhat exaggerating the effects of these seminal losses, has not failed

to throw much light upon the question. He regards involuntary flows of sperm as favoring the development of various nervous affections and mental alienations, and he is right; but his error consists in having singularly amplified the importance of this cause; indeed he attributes to it the origin of a host of maladies.

There is an aphorism which says, *Omne animal post coitum triste*. The same idea, more poetically expressed is found in the following line: *Læta venire Venus, tristis abire solet*. It is a fact, that after coition man is generally fatigued and sad. If he repeat often the generative act, his body becomes weakened, his understanding more obtuse, and all his intellectual faculties less active. Almost immediately after copulation, the genital organ loses its rigidity, and it needs new excitement and a certain interval to reproduce an erection: there is then frigidity, but relative frigidity, since a quarter of an hour previous *vir erat potens*. From this point to impotence there is but a single step, for impotence is but continued frigidity.

Even when the seminal losses are not accompanied by the cynic spasm, they are not the less an active cause of exhaustion and languor. With the woman, who experiences the spasm quite as strongly, or even more so than the man, it may be felt an almost unlimited number of times a day without any appreciable effect upon the general condition. It is not that, then, but the involuntary emission itself, which produces the emaciating effect. An additional proof is that in nocturnal pollutions there is no cynic spasms; and yet, when often repeated, they end by depriving the individual of reproductive power.

Let us now examine what constitutes the difference between frigidity and infecundity. And first, listen to the relation of this authentic fact:

At the beginning of the reign of Louis XIV., a certain lady sued her husband for a divorce, accusing him of being unable to cohabit. In the presence of matrons, *congressus juridicus*, the couple attempted the conjugal act, and the husband experienced the shame of a defeat. They were divorced. The same man, accused and convicted of impotence, married again, and had seven children. This anecdote may, I know, give rise to various pleasantries, and yet there may be deduced from it a very serious fact, namely, that an individual reputed impotent may have more power than he himself thinks, if in spite of an incomplete erection and precipitate emission at the moment of introducing the penis, his sperm possesses fecundating power.

Now, the matrons declared this husband impotent because of his apparent slight physical readiness for coition; nevertheless, as circumstances afterwards proved, he was sufficiently puissant to increase his family. Other individuals, on the contrary, very amorous and very excitable with women, showing themselves exceedingly vigorous, often have no children at all.



Patients affected by seminal losses have a sad and morose disposition ; they suffer from headaches, vertigo, weakness of sight, and often fall into a habitual state of hypochondriacal melancholy. Besides, they are often affected with paralysis, and especially with paraplegia and various nervous disorders, but less frequently indeed, than M. Lallemand has asserted.

Which is the organ that secretes the seminal fluid? The testicle, you answer, and you may think the question a singular one. But it is not the testicle. Tie up the deferent canal of the ram, that most amorous of animals, and you isolate the testicle completely ; and yet the sexual connection takes place with the same energy, and the emission is as abundant as before. Should a blenorrhagia affect the testicle of a man, the epididymus becomes indurated, the origin of the deferent canal is closed, the same desires and venereal aptitudes exist, the emission takes place in equal quantity, but the individual remains unfruitful, and the ram just mentioned is no less so. Hence we conclude that the seminal vesicles secrete the spermatic liquid, and the testicles secrete the animalculæ. The labors of M. Gosselin have perfectly elucidated this important point of physiological anatomy. We may now comprehend how young and strong men, athletic and vigorous in the duties of love, often accuse their wives of sterility ; most of the latter are so fruitful, that should they burden their conscience with a breach of conjugal faith, they would readily conceive. The husbands are affected with indurated epididymis ; they are unfruitful, and thus are the cause of the sterility of their wives.

Although the failing old man, who bows beneath the weight of years, and who has almost reached his century, may not have experienced a rigidity of the penis, nor have ejaculated for say forty years, yet he has still the deep voice of a man, and the angular feature of a male form. On the contrary, had he suffered castration at seventy years, his beard and hair would fall, his voice would change and assume the tone of that of an old woman. The testicle was certainly of no service to him, yet it shows that organ marks and constitutes virility even with those who make no use of the virile attribute. Take one of the fowls castrated for the table, if one testicle should by accident be left in the abdominal cavity it will graft itself on the contiguous tissues, and the animal will remain a cock ; but the eggs of the hen will be unfertilized.

In stomatitis the salivary glands secrete abundantly ; in an irritation of the neck of the bladder the kidneys do the same, and the quantity of urine expelled is notably increased ; in an intestinal inflammation the liver and the pancreas produce a more considerable flow of bile and pancreatic fluid ; in certain catarrhal affections, the action of the nasal and ocular mucous membranes is manifestly stimulated. Well, in the irritation of the *veru montanum*, of the prostrate mucous membrane, and of the entrance of

the ejaculatory vessels, the same thing takes place; there is an increase of secretion, and an abundant flow of the spermatic fluid. Professor Lallemand was of the opinion that in a given case of involuntary loss of semen there was always irritation of the *veru montanum* and of the prostatic mucous membrane. This explained the spermatic flow.

When urine escapes during the night from the bladder of a child, without the participation of the will, it is an evidence of what M. Bretonneau has noticed: that is, that the contractility of the bladder is more exalted than during the day, when the urine was retained, and the child urinates in a continuous stream.

In sleep there is a state of erethism of the bladder, a sort of tetanus of the vesical muscle, which contracts against the little liquid contained; hence the incontinence of urine. This takes place in the early part of the night, generally an hour or two after lying down. The same thing may occur with the seminal vesicles; an individual experiences in this region what the child does in the bladder: incontinence of the semen is analogous to incontinence of urine; and where, in the one case, there is a sphincter and a bladder inert, in the other are inert seminal vesicles and ejaculatory vessels.

Seminal losses, strangely misunderstood before the time of Lallemand, were empirically treated; but in our day when this disease has assumed a position in the domain of pathology, it has been conscientiously studied. The following positions have been established:

1st. Seminal losses resulting from a chronic irritation of the prostate or of the prostatic portion of the urethra.

2dly. Spasmodic seminal losses analogous to the nocturnal losses of urine.

3rdly. Passive seminal losses corresponding with the diurnal losses of urine in children.

These divisions have been established because they appeared to be the expression of the facts observed, and also because they conduct to therapeutic consequences of some importance. Lallemand from his point of view, thought that any medicament modifying the urethral irritation was capable of preventing the involuntary spermatic flows. He remarked that in a great number of cases the seminal loss followed a badly cured blenorrhagia, and that many men ended thus by becoming frigid and impuissant; and he believed that chronic phlegmasia of the urethral mucous membrane was the occasional cause of the affection under consideration. Notwithstanding the exaggerations contained in Lallemand's work, we must acknowledge that he could derive useful results from his treatment which consisted in cauterising by the aid of the consealed sound. When the cauterisation was ineffective he had recourse to anti-blenorrhagic preparations, turpentine, copaiva, cubebs, and to tar injections into the bladder, &c.; by

these means the seminal losses were often cured, and nearly always considerably modified.

Lallemand, although not ignoring the fact that the involuntary seminal emission could be excited by other causes besides chronic urethral phlegmasia, was yet wrong in according to the latter a disproportionate degree of influence. He did nothing for the spasms of the seminal vesicles, while it is necessary to act upon them either by internal medicated preparations or by internal physical means. Belladonna administered before going to bed, in doses of from one-sixth of a grain to one grain, constitutes a powerful and ever useful medicine in nocturnal urinary flows, and as the latter have a certain analogy with involuntary spermatic evacuations, it follows that the same remedy succeeds in a great number of cases. So far as mechanical means are concerned, their object should be to counteract the exaggerated contractility of the seminal vesicles, and to aid the resistance of the ejaculatory vessels.

In 1825, at which time I was interne at the *Maison Royale* of Charenton, Dr. Bleynie, adjunct physician of the establishment, spoke to me of one of his patients affected with impotence, who, seduced by the deceptive advertisements on the fourth page of the newspapers, had consulted a quack who cured him by introducing into the anus a sort of plug of box-wood which he made him wear. It struck me to be some trumpery manœuvre to excite the exhausted sense, or some lascivious resort like those of worn-out libertines in certain circumstances, and I took no more notice of it. Ten years later, in 1835, I had some little business with a young man twenty-six years of age, troubled with decided frigidity, and yet having an irresistible desire to marry. Seeing him plunged in profound melancholy, and learning that he seriously contemplated suicide, I sought in every possible way to relieve him. Then was recalled the remarkable cure mentioned by Dr. Bleynie. Immediately I contrived a kind of plug, and prescribed it to be worn in the anus, keeping it in position by means of bandages. Scarcely a fortnight had elapsed before several erections had appeared, and the seminal losses had become less frequent. My patient got married, and was fully competent to the discharge of the conjugal duty; he is living yet, and is by no means impotent.

I sought to understand the rationale of this remedy, and was soon convinced that the charlatan had employed a means, the true scope of which he was far from comprehending, like M. Jourdain, who made prose without knowing it. In fact the plug, pressing necessarily and immediately upon the prostrate and the ejaculatory vessels, hindered the spasmodic seminal losses.

Since that time I have witnessed many patients affected in the same manner, and as I grow older I witness more of them, for one does not generally go to a young physician with a complaint regarded as disgraceful, but rather to an old practitioner who is sup-



posed to be more indulgent towards these cases. The same remedy has often been by me successfully used.

Something after the fashion of the apparatus used to sustain hemorrhoids, I had prepared, an elastic band furnished with a metallic branch, very slight and elastic, at the end of which was fixed a truncated cone of ivory penetrating into the rectum and supported in front by two attached pieces connected with the band. This cone was arranged in a very solid manner: it did not incommode the wearer much because of the great elasticity of all its parts. Besides, if the anus became chafed, I covered the ivory with caoutchouc.

Subsequently, I endeavored to improve the apparatus and to modify in some manner the form of the cone. M. Mathieu, a surgical instrument maker, then conceived a sort of plug shaped like a lengthened olive: this was a considerable improvement, but afterwards M. Mathieu thought it possible to do without the bandage around the body, and to fix the plug or stopper without the assistance of bands. Hence he gave to the plug a sort of hour glass contraction, around which the sphincter ani closed strongly, and the large portion without kept the instrument in the proper position. An opening was made through its longest diameter which allowed the free exit of gas. The plug, retained in this manner in the rectum, presses upon the prostate and on the seminal vesicles, and this very often suffices, after a week or two, to check involuntary spermatic discharges, to restore to an impotent man his former virile aptitudes, and to prevent uncomfortable accidents to the moral and intellectual faculties.

I would recommend this little apparatus, not only in cases of involuntary seminal losses, but also for nocturnal incontinence of urine. By employing these means, I have often seen the bladder restored to its normal tone, and have witnessed the cure of one of the most inconvenient and unclean diseases. It is scarcely necessary to observe that this plug cannot be applied to girls. In their case, in incontinence of urine, it might perhaps be introduced into the vagina at the same time that a small plug was adjusted in the urinary meatus; but you will readily perceive that you must resort to that only in the *last extremity*, when belladonna, and all other available therapeutic resources have failed; for the defloration of a young girl is always a serious thing, and a physician should assume that responsibility only when he has exhausted all other scientific means.

I have frequently known my colleagues in consultations prescribe cold hip baths, but I always prescribed myself very hot ones. I tell my patients besides, "heat, to a temperature which the hand can scarcely bear, four or five pounds of fine sand in a dish; tie it up tightly in a napkin and apply it to the anus, the perineum, the scrotum, and the penis; keep it there a half an hour or so until cool, and do the same to-morrow on getting up." I do

not know a more energetic anti-phlogistic than caloric, nor a more severe irritant than cold. Put your left hand into warm water, and your right into cold water, the former will be chilly all day, while the latter will be warm. When heat is applied for any length of time to a particular part of the body it gives rise to a reaction.

Thus sea-bathing is a powerful means of producing derivation towards the skin, and continued warm baths are potent agents in extinguishing its exaggerated sensibility. Physicians devoted exclusively to cutaneous affection, attack an eczema of the face by warm shower-baths repeated for two months. They put caloric in contact with the face, cold water causing eczema, which hydrophathy proves conclusively.

The action of caloric is coercive, anti-phlogistic; the action of cold is phlogistic and fluxionary. This fact is conspicuously inscribed on the records of hygiene. Have the cook, the pastry-cook, and the baker who pass several hours a day before ovens heated to  $160^{\circ}$ , red faces? While actually before the fire they may have, but do they afterwards? Have the workmen who pour out melted ore, or who hammer red-hot iron a very high color? On the contrary, when away from the heat they are pale and sallow. Fluxion succeeds defluxion.

Observe then that it is not in a contradictory spirit that I would substitute warm for cold, but because there are really strong motives for so doing. In general, whenever I hear of any remedy, I trouble myself very little as to the source whence it comes, I revolve it about in my mind and endeavor to comprehend it. If it appears to me good and useful I apply it, and should it succeed, I recommend it. It matters little whether it comes from a quack or not if it is really worth anything. I may have for the originator the most profound contempt, but nevertheless I apply the idea for the good of my fellow-men.

A very worthy physician, Dr. Lebatard, was very much surprised some time ago, to see all his patients troubled with sprains getting well under the treatment of a certain individual. He obtained information of the process used, and accordingly, putting it into practice, he kneaded or compressed the foot until the swelling entirely disappeared, and the patient was cured. M. Lebatard, being an honest practitioner, published the fact. This I call doing a useful thing.

Returning then to the use of caloric in the treatment of seminal losses, I repeat that when this agent is applied for any length of time on a part of the body, it gives rise to a reaction. The spermatic emissions may perhaps, under its influence, be augmented for the first and second night, but they afterwards rapidly diminish and the erections become more and more firm. The compressing apparatus and caloric are then to be used conjointly with the means recommended by Professor Lallemand.

When the seminal losses are produced by relaxation, and you are assured that there exists no calculous affection, you must have recourse to cold baths and to a hydro-therapeutic régime. This state is diametrically opposed to the preceding, and it is not astonishing that an entirely different treatment should succeed. You may prescribe *nux vomica* internally, and apply the little compressing apparatus, etc. After very frequent spermatic losses, there may occur nervous disorders so serious as to endure even after the cure of the local affection, their proximate cause. This is an unfortunate complication, and you will have to consult those who have made these diseases—these monomanias with hypochondria, and inclination to suicide, these paraplegias and general paralysis—their special study.

Should you devote your whole attention to the treatment of seminal losses, you would soon find yourself able to relieve nearly all, and even to cure the majority of cases. But be on your guard against those patients who are very rapidly cured, who set up too soon the cry of victory, and who entertain you about their recovered energies and their well tested prowess: for those who have once suffered from involuntary seminal discharges, always run great risks, and if they are not careful, sooner or later may come the renewal of the infirmities which I have mentioned. In such case you will do well to make your patients take preventively the same medicine which may have succeeded at first, and to continue it for a fortnight two or three times a year. "*Prudence*," says the proverb, "*is the mother of safety*."—[*Charleston Med. Journal*.]

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*Of the Possible Cure of Suppurative Arthritis with the Preservation of Mobility.* By Dr. HYPOLITE BLOT, Chief of the Obstetric Clinic of the Faculty of Medicine of Paris.

The object which I have proposed to myself to accomplish, is sufficiently indicated by the title of this essay. I wish to adduce facts, to prove what I have not seen mentioned in any, either of our classical treatises, or in monographs on the diseases of articulations, viz: that a termination of suppurative arthritis with the preservation of motion in the joints is, if not a common, yet at least a possible event.

To demonstrate the correctness of what I have stated in relation to the opinion of surgeons upon the different modes of termination of suppurative arthritis, it will be sufficient to adduce a few passages from the principal authors that I have been able to consult in relation to this subject.

Boyer and the surgeons who preceded him, do not describe at all the inflammations of the joints as distinct diseases; they include their history in that of white tumors, and in relation to these, they agree in stating that, when these affections are complicated with



purulent effusion into the joints, ankylosis is the most fortunate issue that can take place. To find these diseases separately considered, it is necessary to refer to treatises that are altogether modern.

In the *Dictionary of Medicine* we find Velpeau stating that "the least that can happen, when suppuration occurs in such cases, is an *irremediable ankylosis*. In other cases he may be so fortunate as to find the discharge to cease, at least in part; the general sympathies become quiet, the affection becomes purely local, permitting to the surgeon the possibility of a complete removal of the disease by amputation, or resection of the articulation."

In relation to articular ostitis, Sanson thus expresses himself: "Difficult to arrest, even in its incipient stage, it becomes almost impossible to check the disease when suppuration is established. We may then but very rarely hope for a cure, and that generally with an ankylosis of the bones."

In the same work, (El. de Path. Med. Chirur., 4th Edit.,) in reference to traumatic arthritis, we read again: "When pus is formed in the interior of an articulation, the disease becomes much more serious. Imprisoned in a capsule, the pus effects a change in the synovial sac, the cartilages become eroded, and terminates by evolving the spongy extremities in destructive caries. Sometimes a point of the articular capsule is destroyed, and the pus burrowing in the cellular tissue forms often extensive sinuses in which it accumulates and becomes decomposed. The life of the patient is then doubly compromised, by the abundant suppuration and by the effect of its resorption; *ankylosis is inevitable*."

M. Bonnet, in treating of the prognosis of arthritis, concludes by saying: "The gravity of those cases in which pus is generated in the articulations, is much greater than when it results simply in the formation of false membranes. The necessity of an amputation is then always to be apprehended; and under the most favorable circumstances, if a large joint is affected, a year or two may be required to complete a cure, and then *only at the expense of an ankylosis*."

M. Begin, in treating of traumatic arthritis, concludes his article relative to the prognosis and termination of the disease, as follows: "In the rarest and most fortunate cases, the secretion of pus gradually abates; from all the parts surrounding the joint, from the synovial membrane as well as the cartilages, cellular and vascular granulations arise, which, coalescing, obliterate the cavity of the joint and cause a firm and solid adhesion of all the contiguous parts. The joint of the patient is then *irremediably ankylosed*."

In the same work, (Dict. de Med. et de Chir. Prat.,) in speaking of rheumatismal arthritis, M. Roche says: "In some cases the synovial becomes inflamed and suppurates, the cartilages become eroded and ulcerated, the bones become softened and carious, and there is no resource but in amputation or in resection of the joint."

M. Vidal is no less explicit. "In all cases in which it becomes necessary to make a prognosis," says this author, "it should be given with much caution and reserve, for it is either due to an internal cause when it is complicated and will recur, or it is of a traumatic origin, in which case it becomes extremely grave; for if the patient is cured, it will only be at the expense of the functions of the joint."

As to M. Nelaton, occupying a purely surgical point of view, and not having devoted a special article to the consideration of arthritis, he has not found it necessary to express an opinion upon the diverse modes of termination of this affection.

In the *Compendium of Surgery* the following occurs relative to acute arthritis: "When it terminates by suppuration and the formation of an abscess in the joint, we have every thing to fear, and amputation may become necessary to save the life of the patient."

From all the citations that have been adduced, it is evident that authors are unanimous in the opinion that suppurative arthritis always presents an unhappy mode of termination, the patient sometimes succumbing from purulent infection, in others, amputation above the joint or resection becomes necessary; and again, in others, more rare and perhaps more fortunate ankylosis occurs, and the patient is cured with loss of motion of the articulation. I will only add that, having interrogated most of our masters of surgery in reference to their having observed any other mode of termination than those above indicated, I have uniformly received a negative response.

Besides, I have searched in vain for facts analogous to those which I shall report, in the rich collection of cases published by Brodie upon this subject as well as in most of the leading French periodicals.

It seems to me, therefore, interesting to report certain observations made already some time since, which conclusively establish the fact that another and more fortunate mode of termination of suppurative arthritis than those before indicated, is possible; *a cure with preservation of the motion of the joint.*

These observations, although but three in number in the human species, added to analogous ones related by our colleague, M. H. Bouley, at the Society of Biology, as occurring in the equine species, will suffice to prove the *possibility* of the mode of termination we have designated. Future researches will determine in what proportion of cases of suppurative arthritis we may venture to hope for so happy an issue.

One of these observations I owe to the kindness of M. Monod, who communicated to me the principal details of the case in 1848, during a conversation in reference to what I had myself seen. The second case was observed by myself in a patient introduced into the infirmary of the Maternity of Paris, to which I was then

attached in the capacity of intern. Both cases occurred in females soon after parturition. I will hereafter state what importance should be attached to this peculiarity. It is moreover to be well understood that we do not here treat of those multiple articular abscesses which are observed to occur in puerperal fever, but of mono-articular arthritis, freely developed and uncomplicated with any grave constitutional condition.

In regard to the third case, it is borrowed from the clinics of Prof. Nelaton, who has kindly permitted me to treat of it in connection with the two preceding cases. This was a case of traumatic arthritis of the knee, developed in a young man of eighteen years.

CASE 1. The female P., aged eighteen years, a laborer, of good constitution and sanguine temperament, was born of healthy parents and had herself never been sick. Menstruation commenced at sixteen years of age, and continued regularly until she became pregnant. During her entire pregnancy she suffered not the least illness.

The 20th Feb., 1848, without appreciable cause, she gave birth to a male child weighing 2500 grammes,\* at the eighth month of her pregnancy. A vertex presentation in the ——. The birth was natural after a labor of eighteen hours. No accident occurred during the day, but during the night a violent attack of colic occurred, for which she was conveyed to the Infirmary.

Feb. 21st. Simple cataplasms with laudanum were sufficient to calm the pains.

Feb. 23d. The abdominal pains had entirely ceased. She however complained of pain in the right foot, which she compared to spasmodic pain. No marked local affection, however, could be detected by the most careful examination. Slight redness and tumefaction on a level with the internal malleolus was all that was observed; but all movement of the tibio-tarsal articulation was very painful. Six leeches to the part tumefied; a bath, followed with a large linseed cataplasm. To secure the influence of position, the limb was elevated upon a cushion, and to avoid the pain of motion, the foot was fixed by bandages to a hoop that sustained the covering. General condition good; no appreciable fever.

Feb. 24th. The patient was much relieved; she suffers now but very slightly, when the limb is moved. Poultice renewed twice a day.

Feb. 26th. The amelioration is not continued; the tumefaction has increased, especially in the malleolar region; fluctuation, however, is not distinctly perceived. Treatment continued.

March 3d. Since the 26th Feb. the tumefaction has continually

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\* The gramme is about equal to 15 grains Troy.



augmented notwithstanding the means employed, and fluctuation in the malleolar region has become quite distinct. An incision, about an inch in length, was made on both sides of the joint, from which flowed a considerable quantity of laudable pus, mixed with strings of synovia, easily recognized by its yellowish color and syrupy consistence permitting it to be drawn out in long filaments. A soft probe introduced into the internal incision, penetrated more than two inches in depth, and passed without difficulty into the tibio-tarsal articulation. On withdrawing it, it was readily made to pass into several of the other tarsal joints by changing its direction. Without the joint the probe was arrested by fibrous bands. When the foot was moved, upon the leg it caused a sharp pain, and a *rough friction sound, a sort of crepitation, could be distinctly heard and felt.* This fact was confirmed by all the persons present at the time. Same position of the limb maintained, and the same treatment continued.

March 4th. Very evident improvement; pain of the joint less severe; suppuration more abundant; proportion of synovia greater than yesterday. Treatment continued.

March 9th. Suppuration diminishes from day to day, the pus becoming more liquid and the proportion of synovia increasing. Pains none when the foot is not moved. Same treatment continued.

March 15th. Suppuration is completely arrested, and the pain has quite ceased. Even slight movements of the foot excite no pain. Same treatment continued.

March 18th. the incisions are nearly closed; the tumefaction having ceased, the joint is restored to its normal volume; the patient is able to move the foot without pain; the friction sound and crepitation have also ceased. The cataplasm was replaced by a simple unguent.

March 26th. The incisions being healed, and the movements painless, the joint may be considered as completely cured.

March 29th. The articulation again, and without assignable cause swollen and painful, and the surface somewhat red. Cataplasms. Elevation,

March 30th. All the symptoms augmented, and apparently a slight fluctuation felt about the malleolus internus. An incision gives issue to nothing but blood. Treatment as before.

March 31st. Patient improved; suffers but slightly; incision uniting.

April 2d. Symptoms all disappeared. Treatment discontinued. Rest in bed.

April 5th to 17th. During this period the patient gradually acquired the power of using the limb without inconvenience, and left the maternity without the slightest trace of ankylosis or rigidity.

CASE 2. Madame X., thirty-five years of age, of a nervous

temperament and good constitution, had a very fortunate first accouchment, with the exception of an unusual nervous prostration which lasted five or six hours. Lactation was quite normal.

She became pregnant a second time, and now suffered much more than during her former pregnancy. A removal and the cares of a large household caused her during the last months to undergo great fatigue. Her accouchment, however, took place at term without accident, but shortly after that, singular nervous phenomena again occurred, accompanied this time with anguish and insomnia. The mammary secretion was but slight, and towards the fourth or fifth day after accouchment, simultaneously with the cessation of the nervous symptoms, a serous effusion occurred in both knee joints, which continued to increase notwithstanding every effort. At the end of a month, the effusion in the right knee was entirely absorbed, but the distention of the ligaments had been so great that the tibia was partially luxated outwards, and the motion of the articulation was considerably impaired.

In the left knee resorption of the fluid could not be obtained, and the joint remained greatly distended. Perfect rest with cauterization were quite ineffectual. During the second month, an acute inflammation supervened without appreciable cause, terminating in suppuration; a spontaneous and abundant discharge of pus soon occurred from the inferior and external part of the articulation. No serious constitutional symptoms occurred; several counter-openings were made at different points, and the healthy suppuration gradually diminished. About a month after the opening of the purulent abscess of the joint, the knee was cured. From that moment, the motion of the joint was gradually restored, but the power of flexion could never be carried beyond a right angle.

CASE 3. *Traumatic suppurative arthritis cured without loss of motion of the joint.* A shawl-maker, eighteen years of age, punctured the left knee joint with the point of the scissors employed for shearing the shawls. At first he gave very little attention to the injury, but after the eighth and tenth day, a considerable swelling of the joint occurred, and the patient solicited and obtained permission to enter the Hospital St. Louis.

The case presented all the signs of a penetrating wound of the knee. A very extensive, white, œdematous tumefaction had taken place resembling that of *phlegmasia alba dolens*. The lips of the wound were flabby, whitish and œdematous. A sero-purulent liquid issued from the wound, increased by pressure upon different points of the articulation. Adopting the treatment extolled by M. Fleury, the entire joint was enveloped in a vesicating plaster.

Notwithstanding this measure, the tumefaction remained unabated.

ted. The liquid flowing from the wound became more and more purulent, until it no longer contained any serum, and every day a considerable discharge from the original wound and from the counter-openings took place. Perfect rest in a wadded splint.

Somewhat later, the discharge again became more serous, which character augmented until it finally ceased. In six weeks the wound was completely closed. The power of motion in a slight degree still existed. The difficulty at first existing became less and less, and at the end of three months, the patient presented himself to M. Nelaton, having completely recovered the motion of the joint. He now returned to his former occupation of shawl-making.

To the preceding cases I will add another, addressed to the Society of Biology, by Prof. H. Bouley, of Alfort. Our colleague presented the temporo-maxillary articulation of a horse, in which suppurative arthritis had existed for some time. A considerable quantity of pus flowed from the diseased joint, especially during mastication to which the animal was urged, notwithstanding the pain it produced, by the intensity of hunger. Desiring to ascertain the state of articulation, M. Bouley sacrificed the animal, and on examination found that the cartilages from both the temporal and the inferior maxillary surfaces had completely disappeared, and were replaced by red and vascular vegetations, densely crowded together, covered in spots with smooth osseous plates. The synovial membrane had entirely disappeared.

M. Bouley is of the opinion that the joint which, at the death of the animal, was suppurating but little, was in process of healing, and founds this opinion upon observations in a considerable number of other cases in the same species of animal. It appears, indeed, that suppurative arthritis of the temporo-maxillary articulation is not rare in the horse, and it is often observed that the animal, urged by hunger, maintains the freedom of the joint by use, and a complete cure is effected after a longer or a shorter period.

It is scarcely to be expected that similar observations should be made upon other joints, especially upon those of the legs; for, as is well known, when a horse has received so serious an injury as to be incapable of any service, he is not deemed worthy of preservation.

Such are the facts to which I desire to call the attention of surgeons.

I will endeavor now in a few words to present the reflections that flow very naturally from them.

When we seek to account for the happy exceptions which I have presented, two interpretations present themselves prominently to the mind, one having reference to the special conditions in which the first two patients were placed; the other may be applied to the mode of treatment which one of them received. The two cases referred to, presented themselves in fact during the puerperal pe-



riod. May not this condition itself furnish or suggest an explanation of the cause of the fortunate issue of these cases? I am inclined to adopt that opinion.

The facility, and especially the rapidity with which pus is formed in the puerperal state, may furnish an explanation of the effusion and accumulation of pus in joints, without the occurrence of such profound lesions of the synovial membranes and cartilages as to render ankylosis inevitable; the transformations have not had time to become so grave as to prevent the articular surfaces from returning to their normal condition and a consequent restoration of their function of motion. This view of the subject, yet hypothetical, may hereafter acquire the value of a demonstration, if opportunities occur of examining the elements of the joints affected with suppurative arthritis in puerperal females, who may have succumbed from intercurrent diseases.

But until direct proof can be adduced, the hypothesis here put forth may apparently derive support from the peculiar facts observed in our second case, to wit, the presence of a distinct quantity of pure synovia mingled with the laudable pus furnished by the joint; the relative quantity of the former always increasing as the arthritis progressed towards a cure. How, indeed, can the continued secretion of synovia be explained without admitting that the synovial membrane has preserved its integrity, at least to some extent? This observation seems moreover to possess some direct practical utility. From the light of this observation, the surgeon should, if I am not mistaken, be capable of making a clearer diagnosis in a given case. The prognosis being as much less serious, and the prospect of cure the greater as the proportion of synovia in the fluid that issues from the joint when opened, is augmented. This hopeful anticipation being moreover enhanced, if, while from day to day the synovia increases, the purulent secretion suffers a corresponding diminution.

The preceding reflections are especially applicable to the first two cases, and might seem to cast a doubt upon the possibility of obtaining similar success in ordinary cases. But the third case is quite different. In this, we find a genuine suppurative arthritis not occurring in a puerperal female, but in a young man of eighteen years. Taken in connection with the case of comparative pathology above cited, this case seems to compel the admission that suppurative arthritis is susceptible of cure without loss of motion of the articulation.

As to the treatment, perhaps, that was not entirely foreign to the success obtained. It will be recollected that, as soon as suppuration became manifest, free incisions were made on both sides of the joint.

By thus avoiding the serious accidents indicated by all writers on this subject, as the separation and infiltration of muscles, denudation of bones, &c., &c., perhaps, also by thus diminishing the

granulations of the synovial membranes, the wasting of the cartilages, the inflammation, suppuration, and sometimes the necrosis of the osseous extremities of the articulation, we shall augment the chances of curing the diseased joints and preserving, if not the complete, yet the greater part of the mobility of the articulation.

I am well aware that, at first sight, these views seem to be contradicted by what daily experience teaches in regard to the gravity of wounds communicating with joints; indeed, it is well known that such lesions are the more serious and more frequently followed by suppuration in proportion to the size of the wound and the greater facility of admission of air into the cavity of the articulation. These objections, however, are believed to be more specious than well founded, for the two elements of the comparison are not analogous. In one case, we dread to see suppuration supervene; in the other, it has already occurred, and measures are not indicated to avoid it, but to render it as harmless as possible. The best means for attaining this object will probably be to avoid the prolonged contact of the pus with the synovial surfaces, by giving it a free and early exit.

It is hardly necessary to add that these reflections are submitted to the mature judgment of our distinguished surgeons with great reserve and hesitation.

Whatever may be the influence of treatment, the cases of which we have given the principal details prove that in suppurative arthritis the surgeon ought not to despair of curing the patient, and preserving the functional integrity of the limb.—*Archives Générales, and Peninsular Journal of Medicine.*

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*On a New Method of Inducing Premature Labor.* By E. NOEGGERATH, M. D., of New York.

In the following communication, I desire to give an account of a new method of inducing premature labor, which was practised, for the first time, as far as I know, in New York, on Monday 2d June, 1856. I wish to draw the particular attention of my professional colleagues to this method, because I am thoroughly convinced that it is superior to other methods, and will hereafter surpass all the different modes resorted to up to the present time.

The question of the induction of premature labor has not been discussed to the same extent in this country as on the European continent. This is readily explained by the fact, that deformities of the pelvis are much more rarely met with in this part of the globe. But the time will come, and is rapidly drawing near, in this country, that the average number of labors ending naturally, without operative assistance, will lessen in a remarkable degree. The immense immigration of a far from wealthy and well-shaped people on the one hand, and the strong tendency to high city life

on the other, must show their influence upon the coming generations. How different is the experience of the practitioner of to-day from that of the late Dr. Dewees, of Philadelphia, who enjoyed so large an obstetrical practice! In his "*System of Midwifery*" he states, that he observed only three cases of deformed pelvis during his professional career, while during eight weeks' residence in this city, I have met with the same number of contracted pelvises. These three occurred in ten obstetrical cases, which I had partly under my own care, during the absence of Dr. G. C. E. Weber, partly in consultation with him. In one of them a difficult forceps' operation was required; the second one was terminated by application of the craniotomy forceps; the third one gave origin to the present report.

While in this country but two ways of inducing premature labor are generally followed, viz:—tapping of the foetal membranes and the exhibition of ergot—in Germany, France, and England, there are no less than nine methods for accomplishing the same purpose.

They are as follows:—

1. The opening of the membranes.\* Macaulay, Kelly, Sched.
2. Dilatation of the os uteri, by the application of compressed sponge. Brünninghausen, Kluge, Simpson.
3. Partial separation of the Chorion from the internal wall of the womb by fingers or instruments introduced into the orifice. Hamilton.
4. Administration of internal remedies, such as secale cornutum, etc. Ramsbotham, Bongiovanni.
5. Plugging of the vagina with lint or an india-rubber bag filled with water. Schaeller, Ilüter, Braun, (Colpeurynter).
6. Injections of warm water into the vagina by the ascendant douche or the irrigator. Kiwisch von Rotterau.
7. Injections of warm water into the cavity of the uterus.—Schweighäuser, Cohen.
8. Application of electro-galvanism to the uterus. Schreiber, Mikschik, Dorrington, Simpson.
9. Application of sucking-glasses to the breasts.

The great number of methods for inducing premature labor, shows that the older ones had to be ameliorated a great deal, as well in regard to promptness as to the safety of the mother and the child. But it would exceed my proposed limits should I endeavor to discuss the value of the different methods. I will confine myself to the report of the case, and some remarks necessary to present our proceedings in its true light.

*Case.*—Mrs. G. M., born in Germany, living now in New York, presents, in her external appearance, the form of a healthy, well-

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\* We give a chronological succession of the methods; the names adjoined belong partially to the inventors, partially to the chief advocates of the single operations.



shaped female, though she is of a rather short stature, and exhibits on a closer examination, the well-known form of knock-kneed rachitic lower extremities.

In her first confinement, which took place about fourteen months ago, she was attended by Dr. G. C. E. Weber. This eminent practitioner was compelled, in this labor, to perform the operation of craniotomy, in consequence of the malformation of the pelvis. He advised her then to be delivered artificially, before the full term, in case of a second pregnancy, not only for her own safety, but because it would afford a chance of her having a living child. The latter circumstance being of considerable importance, induced the lady to follow the advice of her physician. Conception again took place at the end of October, or the beginning of November, 1855, for at that period, her courses, always regular, ceased. She expected, therefore, to be confined during the first week of August, 1856, with which statement we could thoroughly agree upon a first examination made towards the end of May. The superior margin of the fundus uteri was then found between the umbilicus and the processus xiphoides, the womb being equally developed on both sides. The foetal pulsations we could easily observe on the right side, at a level with the umbilicus, while the feet were distinctly felt near the left upper portion of the uterus. Corresponding results were obtained by a vaginal exploration. The pregnancy was decided to have advanced to the end of the eighth lunar month, with a large-sized living child, having a cranial presentation.

The pelvis was a model of rachitic deformity. The promontory of the sacrum protruding forward and towards the left side of the pelvic cavity, diminished the antero-posterior diameter to  $2\frac{1}{2}$ — $2\frac{3}{4}$  inches, while the lateral diameter remained unchanged in extent; the outlet of the small pelvis was rather enlarged in consequence of the widely open pubic arch and the flattening of the sacral curvature. The whole basin presented but a very small degree of inclination. The general state of health of the patient was satisfactory. On Monday, 2d June, about 11 o'clock in the morning, Dr. G. C. E. Weber and myself proceeded to perform the operation of inducing labor after the method of Schweighäuser, Cohen. The woman was placed upon her back with the nates projecting somewhat over the edge of the bed, and the feet supported by two chairs; an elastic catheter, of the ordinary size, was introduced into the mouth of the uterus and pushed upwards, with the intention of bringing the instrument between the anterior wall of the uterus, and the foetal membranes; the point of it entered the womb to the extent of about four inches,—then, with a syringe adjusted to it, we injected about 7 ounces of water, heated to  $90^{\circ}$  or  $100^{\circ}$  Fahrenheit. As soon as the fluid touched the internal surface of the uterus, the woman complained of uneasy feeling in the abdomen, and we distinctly felt the uterus in a state of rigidity, which

lasted for several minutes. After a time, the finger was removed from the external opening of the catheter, when a portion of the water was rejected through the instrument with considerable force. The withdrawal of the tube was followed by another escape of some water. During the following thirty minutes the uterus was in an almost continual state of contraction with but very few and short intermissions of flaccidity. Besides a slight degree of excitement and little headache, the woman's state of health, as well as her pulse, proved to be unchanged. Towards noon the pains grew stronger, but less in frequency, with long intervals.

At about 7 o'clock in the night, the pain lessened in a degree that we thought it proper to make another injection. This was applied in the same way with the exception that we did not change the ordinary position of the patient in her bed, because the lips of the os uteri were already so much retracted by the previous pains, that the introduction of the catheter would meet with no difficulty at all. Whether the water was injected with a somewhat greater force than at the first time we cannot decide, but it all remained in the uterus, and the operation was followed by a sudden enlargement of the womb. Mrs. M. experienced a very distressing pain in her abdomen; much more so than she did at the former injections. It made such an impression upon her system, that she fell into an almost unconscious state; the pulse sunk suddenly, so as to be scarcely perceptible; her face instantly became purple, and her breathing very much embarrassed. Half an hour later, when she recovered from these symptoms, she was seized with a violent chill, which lasted for nearly two hours. This was followed by a feverish condition, general heat, and a pulse of 130 in a minute. This alarming state gradually subsided, and a renewed succession of strong uterine contractions commenced. At 7 o'clock, A. M., of the following day, we were told that she endured almost incessant labor pains during the last night. At this time we found that the vaginal cervix had disappeared completely, the os uteri was opened to the size of a silver dollar, the well-filled bag protruded into the vagina with every recurring pain. Now we could ascertain, beyond question, a vertex presentation. At 9 o'clock, A. M., the os uteri dilated to its full extent, and the membranous cyst broke, while it was protruded almost to the external orifice. At that time, the vertex was just engaged in the entrance of the pelvis. Passing over the very interesting peculiarities of this cranial parturition, it will be sufficient to say, that it required a full hour of time to bring the head down through the brim of the small pelvis, notwithstanding these tremendous pains, which are only witnessed with rachitic females. But when the greatest circumference of the cranium had passed the upper part of the pelvis, then, one of these violent pains was sufficient to drive the head through the whole cavity, and at once out of the labia externa up to the shoulders. The entire parturi-

tion, from the time of the first injection, was achieved in less than twenty-four hours.

The child, though born in a weak condition, was soon brought to the most satisfactory state of breathing and crying. After the placenta was removed by the ordinary manipulations, the uterus proved to be well contracted. The mother's condition was satisfactory, and has continued favorable.

The first man who conceived the idea of inducing premature labor by injection of water into the uterus was Dr. Tac. Fried. Schweighauser, of Strassburg. In his excellent work, "*Das Gebaren nach der beobachteten Natur*," etc. Strassburg and Leipzig, 1825; he recommends to throw a quantity of warm water into the womb for that purpose. But, as he never seems to have practised it, we must attribute the whole merit to Dr. H. M. Cohen, of Hamburg, who first of all introduced this proceeding into practice. He called the attention of the profession to this method in a thesis written in the year 1846. After this we received by the way of different medical journals, accounts of upwards of 30 cases in which Dr. Cohen's directions were imitated, all of which speak in the highest terms in its favor. The operations did not fail, in one instance, to have the expected result. The expulsion of the child followed from the time of the first injection of water, to an average, in three days, the shortest instance being six hours, the longest six days; the number of injections required was from 2 to 13. Not one case is reported where there were any bad consequences to the mother, while the life of the child proved to be less threatened by this proceeding, than by any of the others. The symptoms of general nervous excitement, witnessed in our case immediately following the injection, have been mentioned by all the different authors, though in a less conspicuous degree. All agree as to their subsiding without any further injury to the patients. The quantity of water to be injected at once was, in almost all the cases, no more than two ounces; the quantity recommended by Dr. Cohen. He also prescribed the use of tar-water, as being somewhat irritating, and, therefore, more prompt in its effect; but afterwards only common water was used, and if heated from 90° to 100° Fahrenheit it will answer all purposes. Instead of the 2 ounces we took 7 or 8 ounces, in order to have a more decided effect, and we introduced the instrument as far as 4 inches into the uterus. The principle requisite for obtaining complete success is, to push forward the tube behind the *internal* orifice of the uterus, so that the point of the instrument, being in the womb, enters a distance of at least 2 inches from the edge of the os, in order to bring the fluid in contact with the internal wall of the body of the uterus itself. The instrument to be used may be any tube that is at hand; an elastic or a metallic, male or female, catheter will answer the purpose. Experience has proved, that the operation worked much slower, or even not at all, when the full quantity of



the water is poured out again. Therefore, it is advisable to keep the cylinder closed at its lower end for some time until the contraction of the uterus, which immediately follows the injection is subdued. If, after withdrawing the instrument, water begins to be discharged in considerable quantity, it will be necessary to plug the vagina.

The interpretation of the fact, that premature labor can be induced in this way, is not very difficult. By the contact of the internal surface of the womb with a heterogeneous body, (water) the organ must be excited from its previous inactivity, and, therefore, we see that the injection is immediately followed by a state of uterine rigor; this soon gives way, and genuine contractions set in, in order to remove the fluid. If this is really accomplished in a short time, we see that the pains die away again; but if the water has been injected high enough, and is retained, the contraction will continue. Still, it cannot be doubted that, after a while, the liquid is absorbed, and uterine action would perhaps subside once more, were it not that the separation of the foetal membranes from the uterus,—induced already by the act of injection itself, and advanced by the previous contractions—stimulated the uterus to activity.

A case like this is sufficiently intelligible of itself, and the details of this method are so obvious, that a further exposition of them would be unnecessary. It did not in a single instance fail of immediate success, neither injuring the mother nor jeopardizing the life of the child, it presents all the advantages connected with a labor where the membranes remained entire.—[*N. Y. Jour. Med.*

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### *Llandolfi's Treatment of Cancer.*

M. Llandolfi's mode of treating cancer having gained considerable notoriety in Austria, he repaired some time since to Paris, in order to induce the surgeons of that capital to endorse the favorable opinions expressed by some of the Vienna practitioners. The French hospital surgeons accordingly appointed a committee of their body to examine into the stability of their claim, and this was done by assigning to M. Llandolfi a certain number of patients at the Salpêtrière. The committee, after watching the results of his treatment of these cases, has just made its report, and the following are the conclusions arrived at. From these it would seem that the remedy is destined to fall into the oblivion that has engulfed so many of its predecessors.

1. M. Llandolfi's method is made up of both local and internal treatment. 2. The latter, which consists in the administration of chloride of bromine, does not possess the slightest special therapeutical value in the treatment of cancer. 3. The local treatment consists in the application of the following caustic: Chloride of

bromine, three parts; chloride of zinc, two parts; chloride of antimony, one part; liquorice powder, one part. 4. Of these substances, the chloride of zinc and chloride of antimony have been long known and employed as caustics. These two chlorides combined in the same proportions as in Canquoin's caustic, form the only portion of M. Llandolfi's preparation that is really active. 5. The chloride of bromine only acts by raising the epidermis, and exposing the denuded part to the action of the other two chlorides, a result easily obtained by a vesicatory applied just before employing Canquoin's paste. 6. M. Llandolfi's preparation is, in fact, only this caustic masked by a coloring and odorous body, which, although it leaves the causticity unimpaired, destroys the precision of application. The chloride of bromine has only spoiled the mixture by rendering it fusible, much more difficult to manage, and much more uncertain in its results. 7. As the caustic so modified does not secure the patient from erysipelas or consecutive hæmorrhage, it can be no longer affirmed that its employment is exempt from danger. 8. Infinitely more painful than most others, this caustic induces most severe suffering, which in general lasts for six or eight hours, and may be prolonged for more than twenty-four hours. Opium and other narcotics are powerless against these pains, while their duration forbids our even thinking of employing anæsthetics. 9. the mode of application is quite vicious, and opposed to the rules of art. In place of attempting to at once destroy the cancerous tumor, M. Llandolfi attacks it by partial and successive applications—a necessary consequence of employing a caustic, the extent of the action of which cannot be calculated. 10. These successive applications, repeated on some patients fifteen or twenty times, induce a total amount of suffering hitherto unheard of. 11. They prolong the treatment indefinitely, and infinitely delay cicatrization. 12. The incessant irritation thus induced is of nature to favor relapse, as experience has only too well shown, and as all know who are imbued with sound surgical knowledge. 13. This method, applied by the inventor himself to nine cases of cancer of the breast and three cases of canceroid, has given the following results: Of the nine cases of cancer of the breast, two have died, four have suffered a notable aggravation of the disease, while in three cases in which cicatrization took place, the disease immediately after re-appeared; that is to say, in no case did a cure result. Of the three cases of canceroid, a cure took place in one; in another there was cicatrization, with reappearance of the disease, and in the other an exacerbation took place that necessitated the amputation of the limb.

To sum up, M. Llandolfi's method can only be applied to certain cancers; it is more painful and more uncertain than several other modes of cauterization; and it is in particular, inferior to Canquoin's method, of which it is only an altered copy. Like all the other methods of treatment, it may succeed in destroying certain

tumors and cicatrization may follow; but it is quite powerless for the prevention of relapse, which it would seem rather to provoke, and so far from forming a step in advance, it adds but another to the illusions that so abound in the history of cancer.—[*Bulletin de Thérap. Med. Times and Gazette.*

*On Paralysis from Muscular Atrophy.* By M. CRUVEILHIER. (*Archives Générales de Médecine*, Jan. 1856.)

In this paper, Cruveilhier claims the priority of the observation of muscular paralysis\* apart from any lesion of the nervous centres. He gives a brief account of the first cases which came under his notice, in 1832 and 1848, and describes the surprise he felt when after, in the first instance, having diagnosed disease of the spinal cord, he found no trace of any affection of that part. He details two later cases which satisfied him that the anterior roots of the spinal nerves exhibited a degree of atrophy closely corresponding to the amount of muscular degeneration upon which the paralysis depends. We must content ourselves with directing our readers' attention to these cases,† and giving an abridged summary of the author's views on the subject. They are as follows:

1. There is a species of paralysis, partial or general, which gradually affects the voluntary muscles, without involving the general or special sensibility, the intellectual or emotional powers, or any function of nutrition, except that bearing upon the muscles.

2. This muscular paralysis is the result of the progressive atrophy of the anterior roots of the spinal nerves, together with the progressive atrophy of the muscles; the posterior roots of the nerves, the spinal cord, and the encephalon remaining sound.

3. This form of paralysis is analogous to that resulting from section of a nerve.

4. This form of paralysis fully confirms the doctrine of Sir C. Bell, relative to the functions of the anterior and posterior roots of the nerves.

5. These observations establish the fact, previously not suspected, that the anterior roots of the nerves exercise a definite influence over nutrition.

6. These observations establish an independence of the anterior spinal roots, from the antero-lateral tracts of the cord, in which not the slightest disorganization was traceable. From this the author concludes,

7. That the anterior roots of the spinal nerves do not spring

\* It is but just to Dr. Edward Meryon (who published some interesting cases of granular and fatty degeneration of the voluntary muscles in the *Medico-Chirurgical Transactions* for 1852,) to state, that he was the first to observe the disease in England, and apparently without any knowledge of Cruveilhier's discovery.

† See, also, *British and Foreign Medico-Chirurgical Review*, Oct. 1855, p. 410.



from the anterior-lateral tracts of the cord, but necessarily from the central gray matter.

Those interested in the whole history of symptomatology and therapeutics of progressive muscular atrophy, we would refer to a very complete memoir on the subject in all its bearings, by Dr. Adolph Wachsmuth.\* He does full justice both to Cruveilhier and Dr. Meryon's claims, but points out that the 'Medical Gazette' of 1831,† contains an article by Dr. Darwall, in which that writer describes several instances of muscular atrophy with paralysis of the upper extremities, but attributes them to previous disease of the peripheral nerves. Dr. Wachsmuth has collected altogether sixty cases of the affection.—[*British and For. Med. Review.*

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*Observations on the Temperature of the Body in Intermittent Fever.*

By Dr. S. A. MICHAEL. (*Archiv für Physiologische Heilkunde von Vierordt. Jahrg., 1856. Heft. i. p. 39.*)

This paper contains two series of observations on the temperature of the surface in persons suffering under intermittent fever. The first contains eleven cases of intermittents of different types, in which the observations were taken every hour, or at least frequently in the course of the day; the second comprises three cases, in which the observations were made during the paroxysms themselves, and generally every five minutes. The state of the pulse and the respiration were generally noted at the same time. The number of thermometric observations amounted to about 260. They were taken by placing the thermometer in the armpit. The following are the general conclusions arrived at by Dr. Michael:

1. An increase of temperature from the normal state or the lowest apyretic condition, at first slow, shortly before or at the commencement of the rigor, rapidly and continuously advances, and then attains its maximum by successive intermittent advances.

2. The temperature remains at its maximum height for a period never exceeding two hours, but generally much less.

3. The diminution always takes place less rapidly than the elevation. It is affected in a graduated manner, each depression of the temperature being followed by an arrest.

4. The sensations of the patient are not in the ratio of the changes of temperature. The temperature is above that of the normal condition, both at the commencement of the rigor and at the termination of the sweating stage. The maximum temperatures occur either during the hot stage, towards the termination of the cold, or at the commencement of the sweating stage. These remarks apply to the various forms of intermittent fever.

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\* Henle und Pfeufer's Zeitschrift, Band vii. Hefte 1 & 2, pp. 1—28.

† Cases of a Peculiar Species of Paralysis. By John Darwall, M.D. *Medical Gazette*, vol. vii. p. 201.

5. In most of the cases, the maximum lay between  $32^{\circ}$  and  $33^{\circ}$  R. ( $104^{\circ}$ — $106\frac{1}{4}^{\circ}$  F.) The highest maximum was  $33\frac{1}{4}^{\circ}$  R.

6. The duration of the paroxysms varies considerably in the cases presenting a tertian type. The limits are sixteen and thirty-two hours; in the quotidian forms they are nine and eighteen hours.

7. The duration of the period of increase is always shorter than the period of decrease in the quotidian forms; in the tertian it is sometimes shorter, sometimes longer.

8. During the free intervals, the temperature generally falls below the normal temperature, still, the instances—especially of the quotidian fevers—are not rare in which it is at least several degrees (Réaumur) above the normal temperature.

9. After the exhibition of sulphate of chinidine (the salt commonly employed in Dr. Michael's cases) in doses of from ten to fifteen grains, there is either no recurrence of an increase of temperature, or a single increase of almost the same intensity, but with less violent subjective symptoms; or again, the temperature rises, though to a lower degree, and the symptoms are scarcely perceptible; or, finally, there is a feeble increase of temperature without any subjective symptoms. Only one case occurred in which there were two increases of temperature.

10. During convalescence, the temperature is generally under the normal elevation, but may occasionally rise a few tenths of a degree above it. At times there are evening exacerbations or evening remissions, or it is the same morning and evening.—[*Ib.*

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*On Dislocation of Tendons.* By Dr. SEBREGONDI.

Dr. Sebregondi, judging from his own observations, believes this accident to be far more frequent than, judging from the little notice of it taken in the manuals, it is supposed to be, it being, indeed, often confounded with partial or complete dislocation or sprain; and at other times explanatory of the success occasionally obtained by empirics by their manipulation of injured limbs.

The dislocation of the tendon may be either simple or complicated with rupture of the sheath; the consequences in the latter case, especially in diseased subjects, being sometimes very serious. The tendons especially liable to be dislocated are those which run a long course from the muscular belly prior to their attachment, lying, for the most part, in a groove, and either surrounded by a sheath, or protected by the adjoining cellular tissue. To these especially belong the tendons of the long head of the biceps brachii, as also the tendons of the teres major and minor. A case of each of these dislocations is narrated by the author, as also another occurring at the elbow-joint, though this is of much rarer occurrence. The accident is often met with in the vicinity of the wrist-joint, especially at the posterior surface; and is frequently

there accompanied by rupture of the sheath, and not unfrequently gives rise to ganglionic formations. The knee-joint is also not unfrequently the seat of these dislocations, the accident not only occurring to the tendon of the sartorius, but also to that of the biceps cruris, in the vicinity of the head of the fibula. The same accident often happens near the ankle-joint, and is frequently mistaken; but ganglionic formation is a far less common result than at the wrist-joint. The author relates an interesting case of dislocation of the tendon of the plantar muscle occurring in a child.

[*Berlin Med. Zeit.* *Virginia Med. Jour.*

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*New Rules for the Treatment of Asphyxia.* By DR. MARSHALL HALL.

I. Send with all speed for medical aid, for articles of clothing, blankets, etc.

II. Treat the patient on the spot, in the open air, exposing the face and chest freely to the breeze, except in too cold weather.

I. *To excite Respiration*

III. Place the patient gently on the face (to allow any fluids to flow from the mouth).

IV. Then raise the patient into the sitting posture, and endeavor to *excite* respiration,

1. By snuff, hartshorn, etc., applied to the nostrils;

2. By irritating the throat by a feather, or the finger;

3. By dashing hot and cold water *alternately* on the face and chest.

If there be no success, lose no time, but

II. *To imitate Respiration.*

V. Replace the patient on his face, his arms under his head, that the tongue may fall *forward*, and leave the entrance into the wind-pipe free, and that any fluids may flow out of the mouth; then

1. Turn the body gradually but completely on the *side*, and *a little more*, and then again on the face, alternately (to induce *inspiration* and *expiration*);

2. When replaced, apply pressure along the back and ribs, and then remove it (to induce further *expiration* and *inspiration*) and proceed as before;

3. Let these measures be repeated gently, deliberately, but efficiently and perseveringly, *sixteen times* in the minute *only*.

III. *To induce Circulation and Warmth*

1. *Continuing* these measures, rub all the limbs and the trunk *upward* with the warm hands, making *firm pressure* energetically;

2. Replace the wet clothes by such other covering, etc., as can be procured.

IV. *Omit the Warm-bath until respiration be re-established.*

To recapitulate, I observe that—

1. If there be one fact more self-evident than another, it is that



artificial respiration is the *sine qua non* in the treatment of asphyxia, apnoea, or suspended respiration.

2. If there be one fact more established in physiology than another, it is that within just limits, a *low* temperature conduces to the protraction of life, in cases of suspended respiration, and that a more elevated temperature destroys life. This is the result of the admirable, the incomparable, work of Edwards.

3. Now, the *only* mode of inducing efficient *respiration*, artificially, at all times and under all circumstances, by the hands alone, is that of the postural manœuvres described in this paper.

This measure *must* be adopted.

4. The *next* measure is, I have stated, to restore the *circulation* and *warmth* by means of pressure firmly and simultaneously applied *in the course of the veins*, therefore *upward*.

5. And the measure *not to be adopted*, because it tends to extinguish life, is the *warm bath*, *without* artificial respiration.

This measure *must* be relinquished.

These conclusions are at once the conclusions of common sense and of physiological experiment. On these views human life may, nay, must sometimes depend.—[*Lancet*.

*On the Treatment of Nævus by Vaccination.* By M. LEGENDRE.  
(Archives Générales.)

M. Legendre believes that the ill success which has attended this practice in the hands of some, is chiefly due to the defective mode adopted. He sums up his observations as follows:

1. *Choice of the Lymph*.—It is of the greatest importance that all the vaccinated spots should take, as it is from their multiplicity and confluence the inflammatory process results sufficing to transform the erectile tissue into non-vascular cicatricial tissue. When but two or three from among seven or eight punctures succeed, the number is usually insufficient for the production of the requisite amount of inflammation, while it prevents the repetition of the operation. The lymph should be therefore taken directly from the arm of the child that supplies it, the lancet being charged afresh after each puncture, and the operation performed slowly, so as to involve only the superficial lymphatic net-work of the skin.

2. *Number of Punctures*.—There is nothing fixed with regard to this, depending as it does upon the size of the nævus; and while one nævus may require seven or eight insertions, double this number may be necessary for a very extensive one. It may be laid down as a general rule, that a sufficient number of punctures must be made to admit of the edges of the pustules, after their complete development, running into each other. M. Pigeaux states that this end will be attained by making the punctures at the distance of a centimètre from each other.

3. *Place of Vaccination*.—Most authors direct the inoculations

to be made in the erectile tumour itself, and not at its circumference; but this practice not infrequently gives rise to hæmorrhage, which alarms the friends. It is generally very difficult to make several punctures in the excessively thinned skin of an erectile tumour, without piercing the erectile tissue, especially as it is impossible so to control the movements of the child, as to be certain that the lancet will not penetrate farther than we desire. Notwithstanding this inconvenience, direct inoculation must be resorted to whenever the nævus is situated on the face; for if we vaccinated around its circumference, the ensuing cicatrix would be larger than the tumour itself. When the nævus is out of sight we need not mind this, and by vaccinating near to, without implicating the erectile tissue, we avoid all danger of hæmorrhage, while we can produce a circle of pustules that entirely surrounds the tumour. The erectile tissue more and more invaded by the increasing pustules, diminishes in size, inflames, and becomes connected together with the pustules into a large, dry, blackish crust. When this falls off, the place of the nævus is found to be occupied by a smooth cicatrix, which is either quite white or scattered over with a few red isolated spots, the size of a small pin's head, and devoid of elevation, the further development of which is prevented by the surrounding cicatricial tissue.

M. Legendre points out the desirableness, before vaccinating infants, of inquiring whether any erectile tumour exists, in order that the opportunity of so treating it may not be passed over.

[*Brit. and For. Med. Review.*]

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*Vitis Vinifera Radix, as a Diuretic.* By A. J. SIMMONS, M.D., of Rankston, Monroe county, Ga.

From a considerable experience, I have found the Grape-vine root to be one of the best diuretics known to me. Scarlet fever has been in my section for some length of time; having many cases of genuine *Anasarca* to treat as a sequel of that disease, I have given the Grape-vine root a fair trial. In a number of cases nothing else prescribed, the water moving off rapidly.

I have the root procured, and then placed upon a heated oven-lid and there burnt into ashes.

℞. Two table-spoonsful of the ashes, pour on a pint of boiling water. The patient drinks it *ad libitum*.

Another prescription often used—℞. Two table-spoonsful of the ashes, ʒii. bitartrate potss., pour on a pint of boiling water. Taken *ad libitum*.

CASE. A case of *Anasarca* of the lower extremities. The subject was a stout negro woman, *enciente* some months, plethoric, robust, hearty woman. Her legs, thighs and left labia much enlarged. ℞. Grape-vine root, two table-spoonsful; bitartrate potass., ʒii. Pour on a pint of boiling water. Patient taken the above pre-

scription, *ad libitum*, consuming about a pint a day, in less than five days the swelling had completely subsided.

I mention this case for the benefit of the young practitioner, as he is often at a loss how to treat such cases.—[*Atlanta Medical and Surgical Journal*.]

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*Conclusions on Antimonial Poisoning.* By B. W. RICHARDSON, M.D.

1. That antimony, both as regards the symptoms it induces, and the pathological results arising from its administration, excites effects in the dog identical with those it excites in man; and that experiments on dogs thus afford a fair basis of comparative research.

2. That the skin, peritoneum, cellular tissue, lungs, all absorb antimony in its soluble form with as much certainty as the stomach; and that, whether introduced by any of these channels, or by direct transfusion into the blood through the veins, the diffusion of the poison is equally complete, and its effects specifically the same. (Absolute.)

3. That, after such mode of introduction, antimony may be detected in the vomited and purged matters, in the stomach and in the contents of the stomach, in the intestines and their contents, and in the lungs, liver, kidneys, blood, urine, heart, and even in serum infused into cavities, if such be present. (Absolute.)

4. That consequently, the detection of antimony in vomited or purged matters, in the stomach or the contents of the stomach, or in the intestines or in their contents, can no longer be considered as any judicial scientific proof that the poison was introduced into the system by the alimentary canal at any part, as has been assumed. (Absolute.)

5. That antimony being absorbed with great rapidity wherever introduced, the point of surface at which it is taken into the system may afford slighter indication of the presence of the poison than any other parts of the organism: *ergo*, that the point of introduction can never be proved by mere chemical analysis.—(Absolute.)

6. That antimony applied locally, so as to admit of being rapidly absorbed, seems to excite but little amount of local injury, although it exerts marked local effects when brought by the blood to any surface for elimination: *ergo*, that the appearance of intense redness or inflammation in the stomach or other part of the alimentary canal, in supposed cases of death from antimony, is no scientific proof, nor yet indirect evidence, that the poison was received into the system by this canal. (Absolute.)

7. That the symptoms of poisoning by antimony by large doses are, as a general rule, those of vomiting, purging, and rapid collapse; and that the same symptoms, somewhat modified in their course, result from small doses repeated frequently during a prolonged period.



8. That to this rule exceptions occur; to-wit, that antimony, when thrown into the system in a large dose, and in such a way as to prevent its digestion, as by direct injections into the veins, may destroy the muscular power so suddenly that the symptoms of vomiting and purging may not present themselves. And, again, that when introduced very slowly, as by application to a small wound, it may also destroy by producing simple exhaustion, without the specific symptoms of purgation or vomiting.

9. That in all forms of antimonial poisoning, death occurs mainly from failure of the circulation; the respirations being continued after the cessation of the heart's beat.

10. That the pathological appearances incident to antimonial poisoning are—(a) general congestion; (b) marked fluidity of the blood; (c) intense vascularity of the stomach in the course of the greater curvature, and, in some cases, of the rectum and other parts of the canal, but without ulceration; (d) a peculiarly pale yellow or occasional dark glairy secretion on the alimentary surface. Lastly, and contrary to the statements of Magendie, antimony seems to excite no other pulmonary lesion than simple congestion.

11. That the election of antimony by different parts of the body is as yet an open question; that the liver, however, would appear to be the structure in which it is most collected when the administration is slow and in small doses; and that the elimination of the poison is attempted by all the secreting surfaces.

12. That, in rapid poisoning, the fatal effect seems due to direct chemical change in the blood, and to indirect effect therefrom on the heart; while, in slow poisoning, there is superadded an interference with the assimilative powers, the result of the lesions excited in the stomach and other parts of the alimentary canal.

[*Association Med. Journal.*]

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*On the Treatment of the Hydrocele of Children.* By Dr. LINHART.  
(Froriep's Notizen, 1856, vol. ii. No. 4.)

In hydrocele, met with immediately after birth, there is usually a wide communication with the abdominal cavity; and as there is frequently a fold of gut at the upper part of the tumour, it sometimes occurs that hernia and hydrocele alternate—so that two practitioners, called at different times, may give different opinions respecting the case. This form scarcely requires any special treatment, since the serum returns, during the horizontal position, into the cavity of the abdomen, where it is easily resorbed. The only treatment likely to be of any use would be the keeping the neck of the processus vaginalis compressed by a bandage.

It is otherwise when the hernia occurs later after birth, when it is tense, and the communication with the abdomen is either very small or absent, the processus vaginalis being closed above. In

the first case, the fluid will often return slowly into the abdomen, although it may occupy six or eight days in so doing; and such cases deceive the attendants of the child into the belief that the means employed have produced the resorption of the fluid. The deception is the more likely, as in very great narrowing of the upper mouth of the processus vaginalis, which is often more than an inch long, re-position cannot be induced by the taxis. This difficulty of returning the fluid is often mistaken for an impossibility, and unnecessary operations resorted to. Indeed, the diagnosis of complete closure is very difficult. When such closure does exist, the case does not differ from one of ordinary hydrocele of the tunica vaginalis.

The indications of treatment are, the removal of the fluid and the closure of the processus vaginalis. With regard to the first, resorption frequently occurs spontaneously, but it can rarely be influenced by the practitioner. The various stimulants employed for this purpose are inoperative, or may be even hurtful by irritating the scrotal skin. When they seem to have been of avail, an aperture has, in fact, existed. The resorption, however, is remarkably facilitated by a subcutaneous incision of the processus vaginalis, which allows the fluid to become effused into the scrotum, where it is rapidly absorbed. A fold of the scrotum should be raised, and a concave tenotomy knife passed in flat between the scrotal skin and the serous sac, so as to make an incision of from one to one and a half inches in length in the processus vaginalis. Dr. Linhart prefers this to seeking to obliterate the vaginal process by means of pressure applied to its neck, which is either ineffectual or cannot be borne, or to the employment of injections, which at this age are not without danger.—[*Brit. & For. Med. Rev.*

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*An Account of the Arrangement of the Muscular Substance in the Urinary and Certain of the Generative Organs of the Human Body.*

By GEORGE VINER ELLIS, Esq., F.R.C.S., Professor of Anatomy in University College, London.

It would be vain to attempt to represent this important communication by an abstract; all that can be done is to draw attention to some of the most striking points in it. After a minute description of the three more or less perfect strata of involuntary muscular fibres which constitute the muscular substance of the bladder, viz:—an external or longitudinal, a middle or circular, and an internal longitudinal or submucous, stratum—the author proceeds to trace them through the rest of the genito-urinary apparatus. With respect to the prostate, after a minute description of its structure, the author deduces that it is less of a glandular than of a muscular body, and is only a largely developed portion of the circular muscular layer that invests all the urethra behind the bulb or spongy portion, and which is continuous, without interruption,

with the circular fibres of the bladder. As the prostatic enlargement includes only part of that muscular stratum of the urethra, the author proposes the name *orbicularis, vel sphincter urethræ*, for both the prostate and the prolongation around the membranous portion of the urethra; while he would confine the old term *prostate* (without the word *gland*) to the thickened and more powerful part near the neck of the bladder. The submucous layer of the bladder is traced throughout the whole length of the urethra. A muscular covering of the vesiculæ and vasa deferentia, consisting of two layers of fibres, (one longitudinal, the other transverse,) is next described; and the paper concludes with a very elaborate description of the sheaths surrounding the spongy structure of the penis.

Mr. Quain was very glad that Mr. Ellis, of whose accuracy the profession might be assured, had given so good a description (which had long been wanted) of the muscular structure of the prostate gland, and he should be glad to see, from the same pen, or from some other, an account of the glandular structure.

[*London Med. Times and Gazette.*

### *Comparative Diagnostic Peculiarities of True and False Croup.*

#### TRUE CROUP

Comes on slowly and insidiously, the paroxysms occurring during the day or night.

*Voice*, hoarse, soon becoming weak and reduced to a whisper.

*Cough*, hoarse and frequent in the beginning, but becomes short and smothered.

The *symptoms* do not remit, but gradually grow worse and worse.

Can, in a majority of cases, see false membrane on tonsils.

*Duration*, from four to eight days.

*Fatal*, in a majority of cases.

#### FALSE CROUP

Comes on suddenly, and almost always after the subject has been for some time asleep.

*Voice*, hoarse, but does not become whispering.

*Cough*, boisterous and hoarse.

Occurs in paroxysms. After the paroxysms are over the child feels well.

Fauces slightly red—no false membrane.

*Duration*, seldom more than two days.

Seldom fatal.

[*N. Y. Jour. Med.*

### *Ingrowing Toe-Nails.* By J. H. BEECH.

I have seen, within a few months, in different journals, several articles on the subject of "ingrowing toe-nails," but none, I think, answering *just* the indications and going no farther.

A simple and effectual operation may be commenced by an incision made by inserting a strong narrow knife nearly over the joint, extending to the end of the toe, deep by the side of the bone traversing the diseased side of the nail.



Next, an elliptical incision just within the skin, uniting with the two ends of the first cut; thus excising the "hypertrophied flesh" (which nearly always exists) with the offending portion of nail.

It is desirable to remove the "matrix" of that side, but not essential, for a more proper direction will be given to the subsequent growth. Excising one side generally will cure both, as the nail has room to push over. If the disease is entirely removed, the wound heals by first intention, making a less painful and more perfect cure than removal of the whole nail in the usual manner.

[*Peninsular Jour. of Medicine.*]

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## EDITORIAL AND MISCELLANEOUS.

*Prevention of Yellow Fever.*—The following communications were written for the Augusta newspapers, by the senior Editor of this journal, with the view of directing public opinion to certain measures for preventing the importation of yellow fever into this city. Inasmuch, however, as the arguments used for this locality are equally applicable to others in the interior, we transfer them to our pages, in the hope that they may be useful at some future time, if not for this season:

The announcement that yellow fever has made its appearance in Charleston, is well calculated to create the apprehension that this pestilence may again be carried into the interior. It therefore becomes the duty of every community, thus threatened, to take such steps as may be deemed most effectual for the prevention of such a calamity, as well as for allaying the fears of the people. In determining the measures to be adopted for this purpose, we need not lose time in discussing the question, whether yellow fever be contagious or infectious, in the technical application of these terms. Let us keep within the limits of the simplest observation, and we shall find it to be now well established, that it can be carried about from place to place, by ships, steamboats, closed railroad cars, and indeed by any conveyance in which a certain quantity of the pestilential air may be transported. Before steamers were in common use, yellow fever was confined to seaports. Steamboats extended its ravages to the towns along the shores of the Mississippi; and railroads have now taken it into our inland towns, and otherwise secure villages. In 1854, when the disease prevailed in both our seaports, it was conveyed by railroad, not only to this city, but also to Macon and Union Point in this State, and to Blackville and Columbia, in South-Carolina. There is no reason why the same may not be done again, unless the people resolve to protect themselves, cost what it may.

The course to be adopted by Augusta, under existing circumstances, seems to me very simple. Let our authorities, *forthwith* prohibit and pre-

vent from entering the city, any box-car, or closed car of any kind, whether containing merchandize, baggage, or the mails, which may come from an infected district. It will be with the railroad companies to determine whether they will put their freight upon open trucks in Charleston, or do so at a point nearer Augusta—but this should not be less than three miles.

Should the disease show itself in Savannah, measures should be adopted with regard to our river boats. Inasmuch as their freight is usually stored upon deck, where no air can be confined, it might be sufficient to cause their hatchway, or other communications with the interior of the boat, to be closed and sealed by an officer some miles below the city, and not allowed to be re-opened until they return to the same place. It would be safer, however, to prohibit their nearer approach to the city than two or three miles, from whence the cargo might be brought up by open boats.

In again referring to the subject of yellow fever, I beg leave to premise that my object is not to excite, but, on the contrary, to quiet the fears of the timid. When the first cases of yellow fever in Charleston were announced, the writer, in common with many others, apprehended that the disease would assume the character of an epidemic, and thus show the whole atmosphere of that city to be contaminated. In such event it was deemed possible, at least, that portions of the infected air, by being conveyed in close vehicles, might occasion the disease in other places. It was, therefore, thought to be the duty of communities thus exposed, to take some steps to protect themselves from so dreadful a scourge. But communities of men are wonderfully prone to extremes of apathy and panic; so, that the very people who would not close a door to keep out an enemy, would leap out of the windows at the first sight of his grim visage. They who are most indifferent to the means of prevention, would, probably, be the very first to fly and to spread terror in their path, if it were even whispered that a case of yellow fever had occurred in their town. To persons thus constituted, it is, perhaps, useless to offer any argument; but, there are some who assign specific reasons for inaction under existing circumstances. The object of this paper is, therefore, to examine their positions.

1st. It is said to be inexpedient or unnecessary to adopt measures of prevention before the disease has become decidedly epidemic in the seaport, because, until it has assumed this character we have no evidence that the atmosphere is contaminated. I must confess that this is the strongest ground upon which I have heard our present inaction predicated, and if the measures of prevention I have recommended involved any serious inconvenience to the community, it might perhaps be well to consider whether we should submit to it or incur the risk, however slight, of importing the poison before we had acquired the positive certainty that it lurked about the streets of Charleston. When cars are daily, and almost hourly,

leaving the seaport, it would be a nice question to decide, on which day, or at what hour it would be safe or otherwise, to take in a cargo of air for diffusion in our midst. This might be done with impunity on one day, and yet be fraught with fatality on the next. Inasmuch, therefore, as the proposed remedy is simple, and would not subject the people to any serious inconvenience, prudence certainly dictates its adoption, upon the first appearance of a disease, which experience teaches us will almost invariably assume the epidemic form, sooner or later, after its introduction into a southern seaport. Yellow fever usually commences its work insidiously, and spreads from point to point, without any such premonition as might be available for escape. Hence it is, that many take it in portions of the city previously supposed to be exempted from its influence. The first intimation we have of the extension of the poisoned area is, the loss of human life.

2d. Some urge in extenuation of their inaction, the fact, that yellow fever has often been in our seaports without being brought here, and that, inasmuch as it has visited us but twice, and with an interval of fifteen years, we have but little cause of apprehension now. I would certainly be the last to exaggerate the degree of our liability to this pestilence, and am free to acknowledge that I do not now, and have never entertained the belief, that yellow fever could often prevail epidemically in Augusta, however sadly it might decimate the seaports. It is not necessary here to give my reasons for this conviction; but I should say that I am well satisfied that yellow fever cannot *originate* here, and consequently that our only danger is from importation. That it is not *always* brought to us when existing in our seaports is certainly no reason why we should not endeavor to keep it away entirely.

3d. Again: It is objected that the measures of prevention proposed are insufficient, because, while they provide against the importation of pestiferous air, they do not prevent the introduction of the disease by persons, or in other words, by contagion. Now, I do not believe that the yellow fever can be communicated by man to man, and it must be obvious to all that contagious diseases can be restricted to no particular locality or section of country, but must and do invade every part of the habitable earth, whereas yellow fever has never done so. But it would lead me farther than the limits of this paper will permit, to discuss the question of contagion, and I prefer to admit for the present all that is claimed on this subject by the most decided contagionists, to-wit: that while yellow fever is usually propagated by atmospheric influence, it may sometimes, under peculiar circumstances, which rarely present themselves, be transmitted by contagion. Even, according to them, therefore, its contagiousness is exceptional, whereas atmospheric importation is the general rule. If the disease, in localities in which it does not originate, owes its existence to atmospheric importa-



tion in 99 out of 100 cases, and to contagion but once in a hundred, will we not have accomplished a great deal by getting rid of the atmospheric cause? It would indeed be a narrow policy that would not avert one evil, because it could not ward off all others.

4th. I have heard it intimated that we have no legal right to carry out the proposed measures; that we cannot dictate to the rail-road companies the kind of cars upon which they may bring freight into the city. I am not sufficiently well versed in the law to answer this objection; but the right of self-protection is a very high one, which I doubt not would be at once recognized by the officers of all rail-roads. They would unquestionably acquiesce in any measure proposed by the city authorities for the protection of human life.

Lastly: there are some who, momus-like, with their fingers upon their lips, object to our saying anything upon the subject, lest a panic be produced and the trade of the place injured. I repeat what I said at the onset: that my object is to quiet and not to excite apprehensions. The people already know their danger. Let them now also know that we are doing all in our power to make them safe, and that we have full confidence in the efficacy of our exertions, and their fears will be allayed. The people know very well that what has happened may happen again unless measures of prevention be adopted. Adopt these, then, and you will do more to restore confidence than by the observance of any mystical silence. True manliness looks the enemy in the face and quietly prepares for defence.

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*American Contributions to Medical Knowledge.*—We are happy to lay before our readers the following communication received from a highly respectable source. We sincerely hope that the subject may be duly weighed, and that our project may be speedily realized.

MESSRS. EDITORS:

I am much pleased with your views in relation to the establishment of a common medium for the collection and diffusion of "American Contributions to Medical Knowledge," as expressed in the last No. of your Journal. I have long felt the want of something of the kind, and doubt not that many others have experienced the same feeling. There is surely no reason why we should not have and sustain such a semi-annual as you propose, to be devoted exclusively, if I understand you correctly, to American contributions culled from all the medical journals of our country. Such a publication would be of incalculable advantage to us all, and be the means of securing us an honorable position abroad, where we are now comparatively unheard and consequently unknown. Keep the ball in motion, and your views will find a hearty response from one end of the union to the other.

MEDICUS.

*On the Use of a new Solution of Iodine in various Skin Diseases.* By Dr. MAX RICHTER.—The solution is made thus: Half an ounce of iodine is to be dissolved in an ounce of glycerine, and subsequently half an ounce of iodine is to be added, which completely dissolves in a few hours. In the experiments made with this solution, it was applied to the surface by means of a hair pencil; the part was then covered by gutta percha paper, fixed at the edges with strips of plaster, so as to prevent the volatilization of the iodine. This was removed after twenty-four hours; and for a similar time cold pledgets were applied. Burning pain, more or less intense, but rarely of more than two hours' duration was produced. The repetition of the painting depends on the appearance of the part and the amount of disease. The conclusions of the author are—1. That the iodine thus employed acts as a caustic; 2. That while it possesses considerable curative powers in respect of scrofulous and syphilitic affections, it is especially useful in lupus; 3. That the solution dissipates even deeply-seated tubercles of lupus; and may be applied for this purpose to the most tender surface without fear of eroding it; 4. That when the solution was applied only to the part of a diseased surface, the remainder was, nevertheless, influenced; 5. That it is particularly serviceable to large and superficial sores; 6. That after a series of paintings, and when the sore was almost healed, the local pains greatly increased in intensity.—[*Wochenblatt der Zeitschrift der k. k. Gesellsch. der Aerzte zu Wien.* *Brit. and For. Med. Chir. Rev.*]

*Anaphrodisiac Property of Bromide of Potassium.*—Thielmann, recommends this remedy as an excellent anaphrodisiac, in satyriasis, nymphomania, spermatorrhœa, and in the frequent and painful erections experienced during gonorrhœa. He has given it in the dose of two to three grains, every two or three hours: with this is joined a vegetable and milk diet, and all acids are forbidden.—[*Med. zeit. Russ., in Gaz. des Hop. Boston Med. Jl.*]

*Acid Beef-Tea.*—The following is the formula for an acid beef-tea, which Mr. Paget has recently introduced into use in St. Bartholomew's Hospital. It was originally suggested by Liebig, and is intended, in cases of great debility, to supply the stomach with fluid nutriment, which, containing its own acid, will task the digestive powers in the least possible degree.

Take of beef, veal, or chicken, chopped fine, half-a-pound,

“ of hydrochloric acid (strong), four drops,

“ of water (cold), eighteen ounces,

“ of common salt, a pinch.

After macerating for an hour, strain off the fluid, using no pressure. The remaining meat may be treated with half-a-pint of water, and a second solution obtained. If the fluid be not clear a second straining will be needed. The solution does not taste acid, and is very palatable. Pepper, or other spice may be added, according to the patient's taste.—[*Med. Times and Gazette.*]

*Chilblains.*—Professor Berthold (*Archives Générales*) employs decoction of nutgalls as a bath, or applied by means of pledgets. The itching and burning disappear in two or three days, but in old cases the remedy must be continued longer. Oak bark (1 lb. to 2 lbs. of water) may be employed as a poultice. These remedies are not applicable to broken chilblains.—[*British and Foreign Med. Chir. Rev.*]

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## ORIGINAL AND ECLECTIC.

### ARTICLE XXVIII.

*Typhoid Fever.* By S. W. BURNEY, M. D., of Forsyth, Ga.

For fifteen years, or more, I have been solicited by many physicians in our State, as well as some who reside without her limits, to submit my views of the pathology and treatment of Typhoid fever to the public at large. Besides, many other persons who have sustained me throughout my professional career, with a devotion that knew neither "variation or shadow of turning," have, through their confidence and partiality, urged upon me the same task. These considerations, rather than a desire to come uninvited before a reading and censorious community, have given rise to this article. I am not unmindful of the fact, that, he who often comes voluntarily before the readers of a public journal, though he may discourse and analyze wholesome truths, often, very often, fails to win golden opinions from either friends or foes. Hence the origin of that trite adage—"O that mine enemy would write a book." With this explanation, I throw myself, with confidence, upon the kindness and indulgence of my professional brethren, believing that the errors of style and opinion will be generously and forbearingly overlooked. While, on the other hand, the same commendable spirit will give me credit for candor and honesty of purpose, in submitting this communication to your pages. Let me remark, right here, that I expect to say but little in relation



to the symptoms of Typhoid fever. For every man who has skill enough to conduct a patient safely through an attack of this disease, will seldom or ever fail to recognize it, by reference to its peculiar pathognomonic symptoms. What I may say, shall be said mainly in relation to the pathology and treatment of this fever.

Again: much has been said about the difference (if any) between typhoid and typhus fevers. Some of our best physicians and pathologists, as well as those who reside in England and on the continent of Europe, assert, with great confidence, that there is but little, if any, similarity between typhoid and typhus fever: whilst others, of equal celebrity and skill, claim that they are synonyms, differing only as to grade and dissimilarity of constitution. For my own part I agree, most fully, with the latter. Ever since typhoid fever made its appearance in Monroe county, I have narrowly scanned the symptoms of every case to which I have been called, and the result has been to satisfy myself, beyond all cavil, that there are no good reasons why any material difference should be made between the two diseases. A blower than mine have discussed this matter without setting the question at rest, and, for that reason alone, I shall refrain from entering upon a labored argumentation to establish their identity. Let it suffice for the present to say, that, I have seen in various parts of the country typhoid fever, and another form of disease, every symptom of which corresponded in the aggregate with the fever cleft by Dr. Armstrong, and other able and experienced physicians, *typhus gravior*. The symptoms were so very prominently developed as to place this proposition beyond all doubt. In some of those cases the *adynamic* symptoms were never more plainly depicted in any of the New England States or Great Britain: the low muttering delirium, a frequent compressible pulse, the sordes about the teeth, the dry black and fissured tongue, the copious secretion of foetid and unhealthy urine, the frequent discharges from the bowels, the great prostration of strength and disgusting foetid breath, together with all the other indications mentioned by the above writers, were plainly to be seen in the cases occurring in my practice, and upon which I confidently rely to prove their identity—differing only as to grade. It will not do to say the differences of symptoms, generally occurring in typhoid and typhus fever, prove the diseases to be unlike in pathology; this

argument is certainly fallacious. Who is prepared to say that the symptoms of *bilious fever*, *pneumonia*, *pleurisy*, and other affections, present the same train of symptoms in every case? They are always modified by peculiarity of constitution, difference of exciting cause, &c. We must rely mainly upon the predisposing cause, as well as the pathological indications thereby produced, to point out the true character of every case.

If the constitutions of all mankind were alike, and the predisposing and existing causes were the same, in every instance, then diseases would be a unit. The poison giving rise to typhoid and typhus fever is, in my opinion, whatever may be its true character, essentially the same; and this poison is what I call the predisposing cause. It acts upon the recuperative powers of the system for a longer or shorter time, gradually, but surely, undermining their energies, and nothing is wanting to develop the aggregation of symptoms save some slight cause, often overlooked, which we term the exciting cause. We repeat it, there can be little doubt as to the predisposing cause being the same in both diseases, and if their pathology differs essentially, that difference has not, in my opinion, been shown to the profession.

Typhoid fever was a stranger to the profession in Middle Georgia, and probably to the whole Southern States, previous to the year 1836. During the winter of that year, it made its appearance in Monroe county, and prevailed with increased violence and fatality until the spring of '37. From that date down to the present, the disease has been of frequent occurrence, having for the last five or six years acted as an *Aaron's rod*, swallowing up, except in certain localities, bilious remittent and bilious continued fever. So complete has been the change in this respect, that we are now rarely called to any disease of malarious origin, and quinine and mercury have given place to leeches, blisters, &c. Typhoid fever and the different forms and grades of pneumonia, are now the diseases of this climate, and such has been the violence of their onset, in some communities, as to decimate our population. It has been our fortune to encounter a great many cases of this fever, at the bed-side, and when we assure the professional brethren that we have studied its rise, progress, and the various phenomena presented by its symptoms, with anxious thought—we speak the words of soberness and truth—and whatever reputation we may have acquired by meeting and battling with this recent

scourge of the South, we repeat, if we can boast of any professional character thus acquired, we obtained it through much tribulation of matter and spirit.

Twenty years' experience with typhoid fever has forced upon our mind the following convictions in relation to its predisposing cause:—First, that it is a poison originating from an accumulation of filth under and around houses of long standing. Second, the primary impression of this poison is upon the great sympathetic nerves, and the diseased state of the mucous membrane of the smaller bowels; and the evidences of disease of the brain—the first of which is almost invariably present, and the latter often seen—together with the other morbid phenomena characterizing the disease, occur as the effect of the debilitating influences of this poison upon the nerves controlling digestion, etc. This view has been entertained ever since we became acquainted with the peculiar modifications of the nervous system, existing in every well developed case, and it was found that opiates exert a controlling influence in every case, when prudently used; but more of this anon. The most obstinate and fatal cases of this disease it has been our lot to treat originated in cabins of long standing, so constructed as to allow of no circulation of air under them, and under the puncheon floors of which the sweepings of half a century had accumulated. If one desires to see this fell destroyer developed in all its frightful beauties and realities, let one manage to crowd these ancient buildings with sleeping inmates, and his desire will be gratified to its fullest extent. This combination of circumstances does not only originate the gravest and best marked cases of typhoid fever, but it many times becomes indispensably necessary to scatter these crowded sacrifices to the God of Sleep, before any diminution takes place in the many-times daily and hourly advent of the disease. Besides, it occasionally becomes necessary to perform various rakings and burnings, and the erection of new cabins, with a sufficient altitude to allow and secure a free circulation of air under the building, before the owners and friends of the sufferers may claim exemption from the disease. Who is it that has had any experience in watching, and tracing the rise, progress and termination of typhoid fever, will deny these facts? We do not claim to be exempt from errors or mistakes, but nothing is hazarded by the assertion, that whatever may be the true nature and character of the specific, remote, or rather the predisposing



cause of this disease of adynamia, it is not marsh effluvia. This miasma invariably gives rise to a form of disease of certain leading characteristics, among the most prominent of which is their periodicity. No one who values his reputation a *baubee* will dare attempt to gainsay this proposition. Well, this being admitted, as all will admit, and as it is equally plain that the disease does not rise and spread from contagious influences, the question again presents itself—Whence comes the poison of typhoid fever? It cannot arise from that peculiar constitution of the atmosphere in which influenza and some other affections seem to originate and spread themselves many times from continent to continent.

Reflection, observation and experience have fixed the above expressed opinion upon our mind, and we most respectfully direct the minds, the master minds of this our day and age, to the elucidation of the matter. As has been already remarked, the first link in the chain of morbid action in typhoid fever is the great system of sympathetic nerves, and the pathology developed by post obit examinations are the results of this primary impression upon the nerves. It has long been an opinion of ours that when this impression reacts upon the parenchyma of the lungs, we have a case of typhoid pneumonia; when the first impressions are upon the smaller bowels and kidneys, etc., we then have what is termed typhoid fever; and when the poison arising either from the filth under, or about old buildings, or the badly ventilated air of ships or jails, inhaled in a concentrated form, we have presented to our observation the *typhus gravior* of writers. Being, however, wholly unacquainted with this disease as it prevails north, we feel we should subject ourselves to the charge of arrogance, and peradventure ridicule, were we to insist upon the correctness of our theory. The fact is, we have long since ceased to spend our time and labor in the vain endeavor to divest of mystery the charming theory of some charming writer. At the outset of our professional career, nothing gave us more pleasure, or engaged our time more, than the examination of the writings of these men. Then we could spend our leisure in drinking down the arguments of the sympathist and solidist. But we have lived long enough to discover that all were right, and all wrong, to a greater or less extent; and as age creeps upon us, and the hand of time begins to press heavily upon us, we are better satisfied with one practical fact than a thousand theories. Hence, if we are taught by experience

that certain leading symptoms obtain in typhoid fever, and that certain remedies, when employed by us, invariably alleviate, if they do not cure these symptoms, we consider that time, always valuable to the physician, would be unprofitably employed in the endeavor to satisfy the world why these symptoms exist, or, how it is the remedies employed effect a cure.

Let the writers of the present age, whose seeming province it is to give tone and direction to public sentiment among the members of the healing art, deal more in fixed practical facts, and less in theory, and the cause of suffering humanity will thereby be greatly blessed. Theory may do something towards diverting the mind of the medical student to wholesome channels; but after he has it in his power to study symptoms at the bed-side, and by bringing the appliances of the science to bear towards alleviation of the "ills to which flesh is heir," he must, to be successful, reason inductively. Some men, of splendid mind and rare opportunities, who theorize so very eloquently and learnedly, as to astonish their friends, and provoke the jealousy and envy of others, are notoriously unsuccessful in the treatment of every disease of formidable character; whilst, on the other hand, we sometimes see practitioners of limited opportunities, having been educated in some cabin in an old field, by some teacher hardly able to conjugate a verb—we repeat, some of these men have been known to build up for themselves, unaided by fortune or the influence of friends, and that too in enlightened communities, a reputation of which any man should feel proud. Now, why is this so? It is mainly attributable to the fact, that the uneducated man has a more logical head, with more tact than the other. Hence, place him at the bed-side, and, by reasoning from cause to effect, he is enabled to form a correct diagnosis, which is often overlooked by the eloquent theorist. But let us not be misunderstood. It is not our intention to assert, or even intimate, that a good education is not necessary to make a good Doctor: because some men have succeeded well in the healing art, unaided by a collegiate course, it does not follow as a corollary that a sound and thorough education is unnecessary. No man can be over-educated. Had these men of limited education enjoyed, in early life, the instructions of a Gamaliel, it would have added greatly to their usefulness.

Such are the facilities now enjoyed for *making M.D.'s* that any child of nature, for a few hundred dollars, may enjoy the soubri-

quet of Doctor. Hence our objections to the rapid multiplication of Medical Colleges in Georgia and Southern States. It is neither our province nor wish to draw invidious distinctions, but we confidently predict that unless our lawgivers shall apply the corrective upon this furor for chartering medical colleges, the cause of humanity must bleed at every pore, and the science of medicine be turned into ridicule and contempt. But having already digressed more than we intended, we must return to our subject.

We come now to speak of the proximate cause, or, in other words, the morbid pathology of typhoid fever. The proximate cause of any disease is nothing more nor less than the disease itself. The effect of the poison generating this disease is, after making its specific impression upon the nervous system, to react upon the mucous membranes most generally of the stomach and small bowels. Should the question be asked, why this membrane should be implicated in preference to others, the reply is, we do not know, nor will we dare assert. The whole matter is shrouded in mystery. There is nothing more mysterious, however, about this primary reflexed action in typhoid fever, than the phenomena attending every disease, of whatever character. Why it is that cold should act upon certain organs and tissues, and marsh effluvia upon other tissues, and so on through the whole catalogue of diseases, is for others to determine. It is enough for the sound practitioner to know that the morbid influences of the poison giving rise to typhoid fever is most generally exerted upon the mucous membrane of the stomach and smaller bowels. This proposition is based upon the *post-mortem* examination of Louis, and many others. Out of the several hundred cases treated by us, from its first visit to this county, up to the present time, we do not remember the first one in which there were not unmistakable evidences of inflammation or irritation of the lining membrane of the ileum, and in all severe cases there were like evidences about the lining membrane of the stomach. Let this fact be borne in mind, and then remember the pathognomonic symptoms of ileitis, viz., fever, diarrhoea, and tenderness over the left ileac region, and it will account for the contrarieties of opinion entertained in some communities upon the treatment of typhoid fever. Some practitioners, without taking the pains necessary to form a correct diagnosis, seeing the symptoms of ileitis present, all of which usually obtain in typhoid fever, arrive at the erroneous conclusion



that the disease is of the latter character, when in fact it is wholly different, originating, it may be, in a surfeit at a dinner party the day before. It should ever be remembered, that ileitis is an idiopathic disease, usually superinduced upon some irregularity in eating and drinking, and that typhoid fever arises, invariably, from the morbid influences of a poison, specific in its character and influence upon the system. This poison is also adynamic in its effects, the recuperative energies of the system, therefore, requiring a wholly different plan of treatment from ileitis. We repeat, let this be never forgotten, and it will serve to lessen the difference of opinion urged upon the symptoms and treatment of typhoid fever. Again: we have seen cases of bronchitis supervening upon attacks of this fever treated as idiopathic bronchitis. Now every practitioner is certainly very much to blame for these mistakes. The usual effect of the irritation in the ileum is to enlarge and ulcerate the glands of Peyer and Bruner. If it be safe to rely upon external evidences, ulceration always takes place in fatal cases as well as those which run beyond the second week.

There being strong prejudices entertained here against post-mortem examinations, we have nothing to offer upon this division of our subject, except the facts of other morbid pathologists, and those predicated upon external data. There can be but little, if any, doubt that many cases recover after ulceration has supervened. Everything depends, however, in these cases, upon the plan of treatment employed. A mild, soothing, and coaxing plan will, in every instance, accomplish much; but let purgatives, nay, laxatives be employed, to the neglect or mal-adroit use of stimulants and refreshing diet, and there would be no way of computing the injurious consequences. But more of this anon.

Let the pathology of typhoid fever ever be kept in view; for any plan of treatment, to be rational or successful, must be based upon the morbid condition of the tissues and organs implicated. Never forget that the disease progressing in the bowels, lungs and brain, is the result of a debilitating poison reacting upon these parts. These facts being overlooked and forgotten, and the practitioner goes groping about in the dark, as liable to injure as to benefit. It were like placing a club in the hands of a blind man, and directing him to hit therewith a certain person standing in a crowd. The object in view might be accomplished eventually, but it would be to the injury of many not aimed at, or directed to be struck.

Having now said as much as we deem necessary by way of elucidating our opinion of things to be considered in typhoid fever, we come to the most important part of our task. Before we enter upon the discharge of it, however, we would once more repeat, that no man ought to be allowed the exclusive management of this disease who could not, from the various symptoms presented to the senses, diagnosticate it correctly. For the practitioner who could not perform properly and correctly this part of his duty, would be like the mariner at sea without mast or rudder, all left to his care liable to destruction.

#### TREATMENT.

*Emetics.*—Whenever there are evidences of biliary derangement, at the commencement of the fever, or soon after, indicated by constant nausea, loathing of nourishment, together with an occasional vomiting of thick mucus, mixed more or less with bile, it has been our constant practice to administer a puke of ipecac, with much benefit. If it be managed so as to secure a thorough action upon the system, the result is to emulge the liver, cleans the stomach of its morbid secretions—thus relieving nausea, equalizing the excitement, and preparing the way for other remedies. But emetics have never yet cured a case of typhoid fever, and nothing is hazarded in saying they never will: indeed we are distrustful of their influence, except in the first stages of the disease.

*Venesection.*—In the winter of 1836, we used the lancet in a sufficient number of cases to satisfy us of its non-efficacy and danger. We are aware of the fact, that we tread upon dangerous ground in making this avowal—the very highest authority being in favor of the remedy. This, however, proves nothing, as the disease is always modified by climate and constitution, this not admitting of the same plan of treatment in all hemispheres. What is the condition of the blood in this fever? Let it be remembered that the blood is very black, and in a dissolved state in every case. If coagulation takes place at all, it does so only to a partial extent. General bloodletting never does good in any disease when this condition of the blood obtains; for it cannot be denied, that the *vis vitæ* is thereby already greatly prostrated, and the only effect the general abstraction of blood can produce, is to lessen very much what we wish to preserve—the recuperative powers of the system. It seems to us no man can be successful in the man-

agement of this disease who neglects to nurse the *vis vite*. But while general bleeding should never be employed, topical bleeding is strongly indicated, and in most cases indispensably necessary. Let twenty (20) leeches be applied over the right ileac region, and repeated daily, and in severe cases twice a day, so long as the heat of skin, abdominal tenderness, and the strength of the pulse, shall indicate their use. The good effect of the leeching, when not contraindicated by the symptoms present, is plainly pointed out by the reduction of the heat of skin, the diminished velocity of the pulse, and the alleviation of abdominal tenderness. It should constantly be borne in mind, that the ulceration in the ileum is the result of the præexisting inflammation. Then cure the inflammation of the stomach and bowels, by the local abstraction of blood, and other means, and you thereby prevent ulceration and death. We prefer leeching to cupping in this disease, because we have satisfied ourselves of this important fact, viz., that in all inflammations implicating mucous tissues, leeching is far preferable to cupping; but where the irritation is situated in the nervous or parenchymatous structures, the application of the cups is preferable to leeches. Now this is not a figment of a disordered fancy, as all may determine by using these means as here indicated.

*Purging.*—This class of remedies should be wholly reprobated in the treatment of typhoid fever. Dr. Graves says, in his clinical lectures, and we fully concur with him, “the idea of curing fever with purging is absurd.” What is the condition of the organs to be disturbed by using purgatives, or even laxatives? The mucous coat of the stomach and bowels is either greatly irritated or highly inflamed. The effect of the action of the purge must be to increase this inflammation, by inviting the blood to the parts upon which it exerts its influence. But, says the advocate for purging in this disease, “the secretions of the stomach and bowels are diseased, and unless they are removed, they superadd to the already existing irritation.” They are certainly diseased; but what is the cause thereof? Is it not owing wholly to the fact, that inflammation is going on in these organs? Nothing is plainer than the fact, that the secretions of all organs must *per se* be diseased, so long as their parts are inflamed. In a majority of cases a persistent diarrhœa is present from the first, instituted by nature to deplete mildly the parts diseased. Then why increase it, with even the mildest means? It should not be interfered with, unless



there be danger of prostration, as there generally is after the first week; then the bowels ought to be locked up, and allowed to remain in this condition throughout the remainder of the attack. Never shall we forget the importunities of the parents of two young men, whose bowels, after running freely during the first week of their attack, were arrested at the commencement of the second. After the expiration of eight days, in one case, and ten in the other, their kind mother, supposing that no one could get well of fever, who was allowed to go this length of time without an action on the bowels, began to intercede with us, to give a mild laxative. But being well satisfied with the state of affairs, we resisted every influence she and others could bring to bear upon the matter. One of these young men was without an action upon his bowels for twenty-one (21) days, and the other seventeen. We thought then, as we believe now, that the administration of the mildest laxatives would have resulted in death. Where constipation is present from the beginning, the plan employed by us is to give an enema of cold water, from two to three times a day. It generally serves to keep the bowels in a soluble condition, and is also refreshing to the patient. Nothing is more valuable than the daily use of cold water enemas toward the winding up of the case, when there is a slight rise of fever of evenings, attended with a flushing of the cheeks, occasioned by the persistence of a slight irritation of the bowels; used under these circumstances, it cools the head and bowels, brings down the fever, and relieves the redness of the cheeks.

An extensive experience of twenty-five years, has forced upon us the conviction, that he who uses purgatives freely in the treatment of this fever will never have much cause for self-gratulation, as the effect must be, to hurry to the grave many a poor fellow-creature, whose fate would have been different, had his case been left to the providence of God. Then away with your purgatives and laxatives—study the pathology of this disease, and follow the unerring indications of nature.

*Mercury.*—There are many advocates for the mercurial plan of treating typhoid fever. There are certainly many serious objections to it. In the first place, such is the inactivity of the absorbent system and the irritability of the bowels, that it is impossible to secure its specific influence upon the system.

In the second place, any dose of this article, given with the

view of producing ptyalism, would, from the very nature of circumstances, aggravate the attack; for it certainly would pass off by the bowels, thus increasing the disease going on in these parts.

Thirdly: Such is the peculiar nature of typhoid fever, that the specific effect of mercury would not cure the disease, even if we could secure it. This declaration is not made "*curiente calame*." In two of the first half dozen we ever had, we succeeded by mixing cayenne pepper with the calomel in suitable doses, in bringing about ptyalism; but still both cases spread themselves out to an almost interminable length. The only effect of the salivation, leaving out of the question its usual sequiter, was an increase of the hitherto existing nervous symptoms.

Fourthly: Two of the worst cases of the disease we have ever witnessed, supervened upon salivation, which had been employed to cure a præexisting diseased state of the system. The subject of one of the cases was a negro girl aged 18 years, our own property; she was severely salivated to cure an attack of syphilis, which she had unfortunately contracted three weeks previously. Several of our slaves were then prostrate with typhoid fever. Albeit, the chancres and bubos had disappeared; we thought it best to keep her a few weeks longer under the influence of mercury, and supposing she might have been predisposed to an attack of the fever—several inmates of the cabin she lived in having been already attacked—we directed her to take moderate exercise in the open air, but not to get wet under any circumstances. The directions were disobeyed, for she got very wet a few days afterwards, and a severer case of typhoid fever has never fallen under our care and management. The nervous symptoms were peculiarly severe and perplexing, and after running for forty-one days, the fever left her with two bed sores, the worst I ever saw—the mere wreck of her former self. The subject of the other case was a negro woman twenty-one years old; she had been salivated a few weeks before for the cure of a cutaneous disease. The existing cause of the fever, in this instance, was not so apparent as in the other; it was hidden in obscurity, unless the ptyalism itself was the existing cause. Her owner had between fifteen and twenty cases of typhoid fever on his plantation at the time the mercury was used in this case.

Whatever opinion may be entertained with reference to the matter, there is nothing preposterous in the opinion, that the spe-

cific effect of mercury may, under favorable circumstances, prove the exciting cause of typhoid fever. But, however much the use of mercury—with the view of securing its specific effect—should be deprecated, it is highly necessary that it should be administered cautiously and prudently in most cases, narrowly watching its effect upon the bowels. The plan pursued by us has been to use hyd. cum. creta in preference to all other preparations, in those cases unattended with looseness of the bowels. Two grains of this article with three or four grains of Dover's powder, given every four hours, has a soothing and beneficial influence; besides, the alterative effect of mercury desirable in most cases, is secured without much danger. But if diarrhoea be present, or if there be great irritability of the bowels—every thing passing off as soon as given—the hyd. cum. creta, if given at all, should be administered in much smaller doses. In these cases, it were preferable to give the blue pill in doses of the quarter of a grain, morning, noon and night; use this cautiously, and there is little danger of irritating the bowels, and its constitutional or functional influence on the liver, is sure, first or last to be attained. This is of the last importance in all those cases in which the *vis vitæ* is mostly prostrated. In much the larger portion of the cases occurring in the winter of 1837, the symptoms were so very closely allied to those depicted by the writers of the past and present day, as distinguishing typhus fever, the most experienced and best practitioners in this county were unable to draw the distinction.

Blue pill, in doses as above advised, was given by us in conjunction with proper doses of opium or Dover's powder, in every case that came to our hands. Every case, to the best of our recollection, that recovered, was attended in the last stages with the frequent discharge of a thick tarry, sort of bilious matter. So very constant were these operations towards the termination of our cases, that we remember with what anxiety the secretions were watched, for the passing off the black tenacious bile gave presage of a favorable termination. The crisis, however, seldom takes place in this way, unless the disease is strongly adynamic in its character.

*Cold Water.*—It has already been remarked under what circumstances we feel ourselves bound to use cold water enemas. There are still other symptoms requiring the use of cold water in a different manner. Should the "*calor mordax*" be strongly developed,



the patient ought to be sponged nearly all over with cold water, frequently repeated, according to circumstances. In some violent cases, we have ventured to envelope the whole body in a cold wet sheet, with the very best results. Whenever this is resorted to, however, blankets should be thrown over the sheet, so as to bring about perspiration. Remove them as soon as the sweating takes place, and should the fever rise again as high as ever, repeat the cold sheet. We have thus repeated it several times, before we were satisfied with the results. Again, the abdominal region is very hot, in all cases attended with severe inflammation of the ileum. When this is found to be the case, there is a strong reason why every appliance should be brought to bear, so as to lessen the inflammation, thereby preventing ulceration, present in all protracted cases, and abridging the stages of the attack, which is a matter of no mean importance. To attain this end, let towels be folded, dipped in cold water, and laid over the abdomen, renewing every fifteen or twenty minutes, till the heat is overcome. Nothing exerts a more potent influence over the circulation, and we have seen the patient collapsed, in this very way, in a few hours; hence, it must be evident to all, the remedy is not admissible, provided the attack is of long standing, and even when properly used must be closely watched—the attending physician using it himself, narrowly watching the pulse, and always stopping it as soon as the temperature of the skin over the bowels is properly reduced.

*Blisters.*—After leeching, and using other remedies called for by the disease, and the blistering grade of the disease has made its appearance, cover the whole abdominal surface with a vesicating plaster, and repeat often enough to keep up a constant discharge. We have applied a blister to the bowels as often as six times in the same attack. It was discoverable to all, that every time the blister was used, the patient, after passing through the nervous derangement thereby produced, underwent a desirable change. This is certainly a valuable adjuvant in the treatment of typhoid fever, and if prudently and cautiously used, will never disappoint the attending physician. It should never be forgotten, however, that blisters make a strong impression on the nervous system, and as they are generally used in the last stages of the disease, when the energies of the system are on the wane, and the nerves always more or less affected, the first influence is decidedly deleterious.

They frequently when thus used, produce a nervous rigor, attended with a great and sudden diminution of the pulse. A dose of opium or camphor, or musk and valerian, promptly relieve these untoward symptoms.

*Opium.*—We come now to what we consider the most important and valuable remedy among the whole range of medical science, in the treatment of typhoid fever. Deprived of the privilege of using it, we would not consent to attack a case characterized by prominent nervous symptoms. If there is a single remedy calculated to cut short an attack, it is opium; we use it in all cases freely, relying upon its conservative influence. Dr. T. Fort, of Milledgeville, Ga., is probably the only physician in the State, who uses this article as boldly and as confidently as we do, in the treatment of this disease. We have conducted a great many persons safely through an attack of some length, by the single use of tinc. opii. Our favorite mode of administering it—from forty to sixty drops given every six hours, or eight, does more towards relieving every urgent symptom of the disease than anything else with which we are acquainted. When the brain becomes implicated, producing great jactitation and wakefulness, the patient can be saved, only by the bold use of opium. The following case will show the effect of this practice:

December 10th, 1849. Called to Mr. B., who had been ailing of the worst grade of typhoid fever for ten days. The physician in attendance informed us that his patient, three days before, manifested the strangest symptoms of diseased brain, since which time he had not slept a moment. We found him with a hot scalp, cool feet, redness of the adnata, which was secreting a tenacious mucus; sordes about the teeth; throbbing of the carotids; a constant raging delirium, making frequent efforts to get out of bed. To cure these symptoms, which portended a speedy dissolution, the patient was ordered to take sixty drops of laudanum every four hours, until he fell into a sound sleep; apply mustard to the feet, and then cold water upon the much heated scalp, every half hour, until it became comfortably cool. The third portion of laudanum brought on a sound sleep, out of which he awoke twelve hours after with his mind fully restored. The after treatment gave but little trouble, the patient fully recovering in a few days. If time and space allowed, we could detail many such cases, in all of which the afflicted were snatched from the jaws of

death, by the fearless use of this remedy. In some cases we have conjoined tartar emetic with the tinc. opii, with signal benefit. This is Dr. Graves' plan of treating this brain fever, and when properly used is attended with signal advantage. Some persons condemn opium in these cases, because, say they, it invites the blood to an already highly inflamed organ. All admit the propriety, nay the necessity, of keeping all other inflamed organs in a perfectly quiescent state, but from some cause or other, hitherto unexplained, the brain, when inflamed, must be permitted to remain in a state of preternatural activity. The truth is, opium instead of inviting the blood to the brain in these cases, takes it from it, by equalizing the nervous energy, and the circulation generally. Those who may hereafter encounter these brain cases of typhoid fever, may be assured, *that their patients will never undergo any amendment, until they are brought under the wholesome influences of a sound sleep*; and he who shall attempt to save his patient in a different way, will be sadly deceived.

We repeat, we could fill several sheets by the detail of interesting cases, in all of which, this valuable article more than sustained the opinion we entertain of it; but prudence forbids this course.

*Stimulants.*—There is a time, in all cases, running beyond the twelfth or fourteenth day, when stimulants are not only required, but indispensably necessary. The physician who purges least, and eschews general bleeding, pursuing a temporising and soothing plan of treatment, and who shall soonest detect the time when nature calls for the use of such means as are required to keep up the energies of the system, thus supporting the *vis vitæ*, will, *ceteris paribus*, always be the most fortunate and successful in the treatment of typhoid fever. Sometimes, if six hours are allowed to pass off unemployed, after this stage has arrived, the doom of the patient is sealed. The most skilful is much troubled in determining when his patient ought to be sustained. Whenever there is doubt resting upon his mind, let the practitioner try such restoratives as would in his own judgment best suit the exigencies of the case, narrowly watching the effect, thus feeling his way, as it were. When they reduce the frequency of the pulse increasing the volume of the artery, let him persevere; on the other hand, if the first effect is to increase the frequency and quickness of the pulse, and augmenting the heat of the skin, take it for granted the stage called the stimulating, has not yet made its appearance, and they



must for the time being, be discontinued. Well, the practitioner being satisfied as to the necessity of stimulating, which of this whole class of remedies is best calculated to subserve the end in view? We have in the course of our career used many, but of late years have settled down upon grain musk, gum camphor and the oil of valerian, as the very best belonging to the *materia medica*. From two to four grains of the former, and four grains of the latter, should be made into a pill and given every two or four hours, according to the urgency of the symptoms. Six drops of the oil of valerian mixed in a tablespoonful of mucilage gum arabic should be given every six hours. These medicines are not only diffusible stimulants, but are also strongly anti-spasmodic in their character and influence: they all, when properly used, diminish the frequency of the pulse, while they enlarge the volume of the arterial system, and very often invite sleep when it is much needed. The whole train of nervous symptoms generally attending, are often by them promptly arrested. Quinine is strongly recommended and extensively used in some quarters in the treatment of the disease; we have often tried it, though without benefit; there is only one symptom, in our opinion, which would authorise its use, and it is this:—In the last stage of some cases of long standing, after the disease has formed a crisis, the patient, from the long hitherto nervous derangement, is attacked very unexpectedly with a periodical nervous rigor or shake, unattended with much, if any, arterial excitement. For the relief of these attacks quinine may be used with much confidence. There is yet another medicine which, although not a stimulant, is used by some gentlemen, (who seem to be easily captivated with new things,) not only in almost every stage of this disease, but in almost every attack of disease attended with arterial excitements: we allude to the *veratrum viride*. From the universality of its employment, it has, in our opinion, done more harm than good. It possesses no curative properties, as all admit, and as it generally affects the stomach and bowels before its specific influence is exerted upon the system, we have seen this disturbance produce much harm. Whatever may be the opinion of others, we shall never, so long as we entertain our present notions, dare use it to any great extent in the treatment of typhoid fever. Indeed, it has so very frequently disappointed us in typhoid fever and pneumonia, that we have been forced, reluctantly we confess, to the conviction, that Dr.

Norwood's great physic is pretty considerably overrated, and that the time will soon come when sound thinking men will pronounce it to be a humbug. But to return: wine should be freely used in conjunction with the other stimulants mentioned, and the patient nourished with chicken broth.

There is yet another remedy classed with stimulants, though possessing many other curative properties in the latter stage of the disease, to which we invite attention: we allude to spirits of turpentine. It possesses, and many times produces the most astonishing sanative influences, not only in the latter stages of this disease, but in all others depending upon inflammation of the mucus surfaces. Whatever of credit has accrued from the introduction of this remedy into the treatment of this class of diseases, belongs exclusively to us. As early as 1834, we were in the habit of using it in all cases of bilious remittent fever, spinning themselves out to great length, in consequence of the mucous membrane of the ileum taking on disease, as the result of the unwise use of purgatives in the first stage. Besides, in all cases of diarrhoea among children, where the disease seemed to be perpetuated by an inflamed state of the living membrane of the small bowels, we were constantly in the habit of using this article in small and frequently repeated doses, with astonishing good results. It is very commonly the case, that remittent fever is converted into a modification of disease, termed by some "slow fever." This change in the type of the fever is generally the sequence of an unthinking, unwise persistence in purgatives. It was for the cure of a case like this we first ventured to use spirits of turpentine, and its success in this case led us and others to administer it in the treatment of genuine typhoid fever. The subject of this case was a lady twenty-five years of age; she was attacked thirty-one days before we saw her, with remittent fever; she had been treated by Dr. J. our then partner, a gentleman of much skill, and enviable celebrity. When first called to her by her husband, in the absence of our partner, there were unerring evidences of inflammation in the mucous membrane of the ileum; the tongue was very red and dry, the cheeks flushed every evening, the abdominal region tender and slightly swollen; there was also borborygmus, a strong predisposition to diarrhoea—the mildest laxative exciting action in a few minutes—strong pulsation in the bowels; a sparseness of urine, which was very red, and much dryness about the throat, with a

pulse ranging from 110 to 120 in the minute. We recommended ten drops spts. terebinthem, morning, noon and night, in a little sweetened water; a mush poultice to the region of the bowels, to be renewed every six hours; mucilaginous drinks; forty-five drops tinct. opii, every night at bed-time, and boiled milk to nourish her. It was astonishing to witness the prompt relief following this treatment. The fever began to abate after the second dose of turpentine was given, the patient remarking at the time, "I feel the spirits of turpentine taking hold of the disease in my bowels, and I believe now, for the first time since the supervention of my illness, I shall get well." Well, she did recover, and that too with such rapidity as to astonish all friends, as well as physician. This case gave me much eclat in our community, besides imparting a celebrity to the chief remedy employed, which it has ever since deservedly enjoyed. It were a task of supererogation to point out minutely the symptoms which call for the use of spirits of turpentine in typhoid fever; let it suffice to say, that in the last stage, where there are evidences of inflammation as well as ulceration of the ileum, the remedy may be administered with confident assurance of speedy benefit. The practitioner who is ignorant of these symptoms, would do well to transfer his cases to those who are wiser and better qualified to discharge their duty. Our usual plan is to give from six to ten drops, morning, noon and night, in a little sweetened water. When it manifests a tendency to increase the peristaltic motion of the bowels, amounting to looseness, ten drops of tinct. opii ought to be conjoined with each dose. Such is the confidence we have in the curative properties of this article that we would not undertake the management of the fever were we deprived of its use.

It is, however, occasionally necessary to assist the spirits of turpentine by the use of astringents, especially when there are evidences of ulceration of the bowels. Those preferred by us are nitrate silver and alum. Nothing is sometimes better calculated to arrest the troublesome diarrhoea superinduced by ulceration, than half grain doses of nitrate silver given in the form of a pill, three or four times every twenty-four hours; it probably has a wholesome influence in a two-fold sense, acting directly and specifically upon the ulcerated and inflamed surfaces, and secondarily benefiting the ulcers, &c., by arresting the peristaltic motion of the bowels; for nothing can be plainer, in our view, than that the



ulcers and inflammation will never be arrested so long as this state of things shall continue. Then lock up the bowels, if it be possible, and give nature as well as art some chance to effect a cure; and he that understands best the art of controlling the bowels, will be most successful in curing the disease. Should the nitrate silver fail to attain the end in view, try alum in doses suited to the age and condition of the patient: an adult will usually bear four grains every four or six hours. This article, like nitrate silver, acts in more than one way; it certainly produces a direct influence upon the ulcers and inflamed surface, and has also an indirect action, by controlling the bowels. It sometimes acts like a charm, lessening the fever and diarrhoea, and cleansing the tongue in a few hours. Then never fail to give it a fair and impartial trial. In every case of the fever, mucilaginous drinks made cold with ice, ought to be used in every stage of the disease; it many times does much toward curing the disease, and such is the confidence some have in it, they believe a severe attack could not be cured without a constant persistence in the use of the ice. The diet should be wholesome and nourishing throughout the attack: boiled milk, tea and coffee, etc., are preferable to all other articles in the first, or non-stimulating stage; but after the patient reaches that stage, when stimulants prove to be antiphlogistic, chicken broth and beef-tea are preferable. Let him be nourished at proper intervals and in proper quantities in the day time; but never wake him up of nights to take either drink or nourishment. This rule should be constantly borne in mind, for more depends on it than meets the eye at first. He who is allowed to sleep on without disturbance, stands a much better chance for his life, than one who is annoyed by officious and ignorant nurses and attendants, every now and then waking him up, with the vain endeavor to get him to feed.

There is yet another important item in the treatment, to which attention must be called; it is this:—The patient must always have the attention of the nurses directed to his clothing, and prompt removal of the secretions from the room. Nothing contributes so much to the comfort of the sick, in cases of long standing, as the frequent change of clothing; and it is to the neglect of this, as well as the prompt removal of the secretions from the sick apartment, we must attribute the notion so prevalent in some latitudes, to-wit, that this disease is contagious. There can be no evidence adduced

in support of its contagiousness, but there is no doubt the disease may become infectious, by the neglect of the highly important rules above mentioned. Never forget the indubitable necessity there exists for scattering the families of those who suffer, to any great extent from the disease. The attending physician many times does more good by insisting upon this desideratum, than in any other way.

Having already said more than we intended at the outset, we must bring this article to a close. If we have been fortunate enough to make a single suggestion which shall prove beneficial to our professional brethren, in their efforts to relieve suffering humanity, we shall consider ourselves amply remunerated for the trouble we may have undergone, in preparing this essay for the press. And, in conclusion we would remark, once for all, that we were not constrained, either by motives of vanity or egotism, in submitting these views to a censorious public.

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ARTICLE XXIX.

LETTERS FROM SAM'L. D. HOLT, M. D., UPON SOME POINTS OF GENERAL PATHOLOGY.

LETTER NO. 16.

MONTGOMERY, ALA., September 25th, 1856.

*Messrs. Editors*—Up to the summers of 1853, '54 and '55, I had considered myself an incompetent witness to testify as to the character of yellow fever, as, until that time, all that I knew about it was from "hear say" evidence, and I should have been unwilling, previous to that time, to have been put upon the *stand* for the purpose of giving even *parole* evidence. But, having during those periods formed somewhat a familiar acquaintance with its character, I feel willing, whether competent or not, to submit my testimony in writing, which shall, according to the rules of law, be confined to the facts of the case, claiming, at the same time, the privilege of "*experts*" of forming and expressing *opinions* from the testimony of other witnesses, as well as from observation and experience, of which I must confess, in this disease, I have had comparatively little. I cannot testify as to its *paternity*, or its *genealogy*; whether it is a native American, or a naturalized foreigner—whether it is a *creole*, or a foreigner, making occasional summer and autumnal visits to our southern sea-ports, and now

and then extending them to the interior river towns. Upon these points, and many others in relation to it, the testimony is abundant, but contradictory, and in many instances unsatisfactory. Some have testified, very positively, that it is a *native American*; and others, as confidently, that it is a *foreigner*. My own opinion is, from the evidence, that it is a *creole*, and belongs to the *typhoid* family, and is decidedly democratic, from the great *love* it has at times for the *people*, and the wonderful fondness and partiality which it always shows for *foreigners*. But seriously: There is no disease concerning which so much has been written, and such a mass of testimony has been collected, as yellow fever; and yet, strange as it may appear, there is none concerning which there is such a conflict of opinion, and concerning the nature and treatment of which the profession are less agreed. This is certainly not owing to a want of *facts* regarding its history and character; for any one who will examine *the work* which Dr. La Roche has recently furnished to the profession, (which is an ingenuous embodiment of the opinions of every observer, of any note or distinction, upon every important point relating to its history and character, from the earliest records of its existence to the present time, constituting a perfect encyclopedia of yellow fever,) will be satisfied that there are but few *facts* which remain to be established, which can be expected to be done by *observation* of the disease. I do not know that I shall be able to add a single *fact*, worthy of record, derived from my own observation and experience, which is not already known to the profession; nor do I expect to be able, nor shall I undertake to reconcile the conflict of opinions upon points which always have, and must always continue to divide the profession. But I do hope to be able, from the great mass of testimony which has been collected, and which we must regard as truthful, to show that the causes of disagreement, as to the character of the disease, are not as numerous as well founded, and as irreconcilable as they seem to be. As an apt illustration of these causes of disagreement, and of my views of the subject, I will cite the fable of the "Travellers and the Chameleon." Each one saw the same animal, and each described it accurately in its proportions; but each one saw it in a different light, and a different shade of color, to which each was willing to swear; yet no two were agreed as to the color of the animal. So it is with yellow fever. The great chroniclers who have furnished us with an account of the disease,



have each done so with an honest conviction, no doubt, that the light in which they have observed it, and the character in which they have represented it, was the *true* and *natural* character of the disease. Some of these who have had an opportunity of observing it, in different parts of the world, at different periods, and under different circumstances, in the same localities, have found the disease so changed and modified in its character, from their first impressions, as to raise a doubt in their mind as to its identity, or, to use our metaphor, whether it is the *same animal* which they had seen under different colors and aspects, or not.

I have on a former occasion, though on a different subject, expressed the belief, that yellow fever is a disease "*sui generis*," and that in its essential typical character it is *universally* the same. This opinion is sustained by the greatest weight of testimony, and it is in this light and character that I shall examine the disease, with respect to its pathology, considering the chameleon hues and complexions of the disease to depend upon extrinsic and adventitious influences, and not upon those which are inherent either in the disease or *the cause* which produces it. To be still more explicit: What I mean, is that yellow fever has *one essential and specific cause*, which, in operation, produces a certain and determinate set of phenomena and results, which *no other cause* can produce; and that the causes which so often combine to produce *diversity* in the character of the disease are non-essential to its *production*, but *necessary* for a change or modification of its character. *One* cause produces the chameleon—the *other* its colors. But it would be a difficult matter to determine who, or whether any one has ever seen it in its pristine color, or character; for, as I have before stated, the combination of influences which are necessary for the generation or production of *the cause* of yellow fever, if not identical, are nearly allied to those which determine its modifications, and these are found so universally to co-exist, and so generally to co-operate, that it is doubtful whether the disease ever exists in its pristine character, fully divested of the non-essential and modifying influences. It is in this character, however, that I shall consider it, observing the same classification which I have adopted with respect to other fevers, believing that it will fully cover *all* the forms and modifications to which the disease is liable. My object for thus considering it, is to endeavor to *fix* the pathology of the disease in its *essential typical character*, so far as it is known,

upon which a general and uniform system of practice may be founded. For so long as the pathology remains unsettled, or is made to rest upon the modified forms of the disease—to which it is continually liable—so long will it be a subject of dispute, and the practice little better than a system of empirical experimentation.

With regard to the *pathology* of yellow fever, Dr. La Roche says: "Painful as the avowal may be, it is a fact, the truth of which cannot be denied, that, notwithstanding all that has been written on the subject of the yellow fever in this and other countries—all the labor that has been bestowed on an investigation of its causes, characters, and anatomical phenomena, little progress has, so far, been made in a knowledge of the pathology of that disease." Now, I am not prepared to admit the truth of this avowal, in its full import, or to admit that the profession are as much in the dark, or as much behind hand, with respect to the pathology of yellow fever, as they are with some other diseases, of which they profess to know more. Of what advantage to us is the great store of information which has been collected upon every important point connected with the history of the disease, or where shall we go for more reliable testimony, if from this we cannot form correct views with regard to its pathology? The truth is, in my opinion, that there is not so much a *lack of knowledge* with respect to its pathology, as there is a *want of agreement* as to the *special* pathology of the disease, in its *essential*, unmodified, and uncomplicated form; the pathology having, unfortunately, too often been founded upon *groups* of symptoms, and *conditions* of the system which may belong to, and are often observed in connection with *other* diseases besides yellow fever, and are consequently *non-essential*. I have founded my classification of fevers upon the *general pathological conditions* of the system, and have maintained, and shown, that the causes which produce and determine these general pathological conditions, were *non-essential* to the *production* of any particular type or form of fever, but that *all* fevers under their influence were *determined* in their character by the general pathological condition of the system, and that the *particular* cause of the fever, of whatever type or form, had no necessary or essential agency in determining the general pathological condition which determines their character.

If this matter requires any further elucidation, I will take examples from the disease in question—yellow fever—which appears

sometimes in an *inflammatory* garb, sometimes an *irritant*, and sometimes *congestive*, with the intermediate grades, not generally recognized, as the *congesto-inflammatory* and *congesto-irritant*, and *always* the *typhoid*, which I consider the *true type* of the disease. Now, the point which I particularly desire to impress upon the mind of the reader is, that the *specific cause* which is *essential* to the *production* of yellow fever, has *no necessary* or *essential agency* in *determining* the general character of the disease, except so far as the latter, or typhoid character, is concerned; and that fever *from any other cause* will assume the same garb, or character, under a like *general pathological condition* of the system, illustrations and examples of which I have given in pneumonia, and intermittent and remittent fever. Hence it follows that no pathology of yellow fever can be perfect, and free from objections, which is based upon a *general condition* of the system, which the *cause* of yellow fever has no agency in determining, and which determines alike the general pathological character of *all* fevers. And though the treatment must necessarily conform to the general pathological character of the disease, which is constantly liable to change, yet, in its essential character, the principles of practice founded upon its *special pathology*, which is *universally the same*, admits of no change.

As the views and opinions which I entertain with regard to the pathology of yellow fever, have been derived chiefly from the great mass of testimony which has been collected concerning the disease, and which is open to, and now the common property of the profession, I do not deem it necessary that I should resort to argument and proof to establish every position which I may assume, at least, not until they are assailed, or called in question, particularly as I shall be careful to assume none which is not sustained by at least respectable weight of authority. The position which I have taken, with respect to the pathology of intermittent and remittent, and other *periodic* or miasmatic fevers is, that they belong to the dynamic class, having their *origin* in such a change of nervous power, as to disturb to a morbid extent the *balance* of the circulation, causing unequal distributions and accumulations of blood, without necessarily affecting materially its healthy or normal condition; and that in all such diseases in which the blood becomes depraved, and its vitality impaired, it is the consequence of pre-existing morbid actions in certain organs, which the *condi-*



*tion of the blood* has no *necessary* agency in exciting. That which I assume with respect to the disease in question (yellow fever,) is, that it belongs to the zymotic class and is a *necræmic* disease, having its *origin* in an altered and depraved condition of the blood from the action of a specific poison, which, in addition to its direct tendency to destroy the *vitality* of the blood by a destruction of its *fibrin*, produces by its sedative action upon the nervous centres, a *shock* or state of nervous depression, followed by a febrile reaction, being a *single* effort of the system, more or less prolonged, to overcome or relieve itself of the morbid impression, which so far as the febrile movement alone is concerned, differs little from other fevers of the same class, being limited in its duration to the term of the zymotic action of the poison, which seldom or never continues longer than the longest interval, or quartan type of intermittents, (seventy-two hours,) and often terminates with the shortest interval of those fevers, (twelve hours,) during which time such molecular changes are effected in the general capillaries, (which system of vessels I believe to be the *seat* of the disease,) as to diminish their tone and vitality, giving rise to irritation and consequent engorgement in those vessels, which in connection with the previously altered, attenuated, and depraved condition of the blood from the direct influence of the specific cause, gives rise to a general hemorrhagic diathesis, and a putrescent tendency of the system, which constitutes the essential pathology of the disease, under whatever form or modification it may appear. Whatever changes may have been effected in the condition or constitution of the blood from the action of the poison anterior to the actual invasion of the disease, which should date from the commencement of the febrile movement, at which time it *begins to localize itself*, not only with respect to the *capillaries generally* but to *particular organs*, which as one or more become permanently involved, during the progress of the *first or febrile stage* of the disease, have their functions so deranged and even suspended, as not only to prevent the elimination of the specific poison from the system, but to cause the blood to become overloaded with noxious matters, even more deleterious than the specific poison itself. Now, if by the efforts of nature or art, these organs, the *lungs*, the *liver*, the skin and the kidneys can be kept in the exercise and performance of their respective depurative functions, so as to prevent the retention and accumulation in the blood of the septic and noxious matters which

are generated in the system, during the progress of the febrile stage of the disease, I am strongly inclined to the belief that there would seldom be more than one stage to it. This opinion is sustained by the fact, that the disease can be *aborted*, that is, prevented from manifesting any other signs of morbid action than those which *belong* properly to the febrile stage of the disease: in other words, that it can be *arrested in that stage* from which the process of reparation will commence and go on to convalescence. I would not pretend to say that *all* cases could be so *aborted* or *arrested* in their progress, however judiciously managed, but I must say, that judging from my own observation, the larger number may be, as during the prevalence of the disease with us, during the summers of 1853, '54 and '55, I had the management of about fifty cases, all of which, after a *single* paroxysm of fever of about thirty-six hours duration passed into a state of convalescence, with the exception of *two*, one of which died on the third day with *black vomit*, and the other, after a paroxysm of fever of seventy-two hours, had *black vomit*, but recovered. Such a result justifies me in the belief, that the disease is not so much an "opprobrium medicorum," as certain learned and experienced members of the profession would induce us to believe. But one thing is certain, that there is no point more clearly established in the history of the disease, than that it is amenable to treatment *only* in its *first stage*, and that subsequently, all heroic measures are rather injurious than beneficial. This matter it is necessary we should examine into a little: The fever, which is always one of a single paroxysm, is unquestionably, in my opinion, a fever of *irritation* of the general capillaries from the direct action of the specific cause upon those vessels, and the uniform consequence and effect of that irritation is, to *keep them* in a state of *active* engorgement *during* the febrile stage, whatever may be the general pathological condition of the system with respect to its amount of vigor and excitability, that is, whether the condition of the system favors the congestion, the inflammatory, or the irritant form or modification of the disease, which (the latter) I consider as its true and essential form, and to *leave them* in a state of *passive* engorgement when the febrile action subsides. Although general capillary irritation throughout the system is *characteristic* of the disease, its tendency is always to *localize* itself by falling with much more force upon some organs, tissues and systems, than upon others; and these are

unfortunately the organs which are chiefly employed in elaborating the materials for supply and reparation, or in the elimination and excretion of the products of disintegration and decay. Hence, the stomach is so uniformly found to be a point of attack, as to give plausibility to the idea, that it is the "*Throne*" of the disease, (but this I cannot admit, if for no other reason than that I had already pronounced the disease "*Democratic*," which renders it incompatible with any *Throne* except the *general capillaries, the seat of its power*;)—this may be ascribed, however, rather to the greater vascularity and extent of the mucous membranes, in the stomach, than to any particular *elective affinity* for this, over other organs; for, though next to the nervous symptoms which arise from capillary irritation in the nervous centres, the stomach is usually the first organ to manifest disturbance of function, it by *no means* follows as a consequence, that the stomach *should* be considered as the *prime seat* of the disease, or that other organs are not as deeply involved, though they may not show it as early. On the contrary, the disordered condition and suspended function of the stomach, bears no proportion in its direful consequences, to the disordered condition and suspended functions of the liver, kidneys and other depurating organs; and there is no good reason for supposing that the cause of the gastric disturbance, and the nature of the morbid action which exists in the stomach, is at all different from that which exists in, and interrupts and suspends the functions of the liver, kidneys, etc.,—all of which *alike* owe their disturbance to *irritation* and *engorgement* of their respective capillaries. But it is not to be inferred that all the vital organs are invaded simultaneously, or that each one suffers in the same degree, or that indeed, they should all become subject to the process of *localization* at least, to such a degree, as to cause a *suspension* of their functions. This *process*, which is generally progressive, commences, as I have stated, with the febrile movement and continues through, but *ceases with the febrile stage*, though many of the symptoms which are consequent upon its localization, and which are considered characteristic of the disease, do not become manifest until that stage of the disease has passed by; indeed, during that stage, there are but few symptoms characteristic of the disease, except its *general irritative* character, and its type, or term of continuance of its hot or febrile stage. Although from the want of plasticity in the blood, and from the general capillary irritation and engorgement



there exists from the commencement, a hemorrhagic tendency, which is sometimes manifested by *active* hemorrhage during the febrile stage; yet, ordinarily, it is not until the subsidence of the fever, when the *whole* vital forces of the system are left in a state of prostration, and the capillary system in a state of *passive* engorgement, that the characteristic hemorrhages occur. The same may be said with regard to the liver, kidneys, etc., that though the functions of the liver may be suspended early in the disease, from the influence of the specific cause, or from adventitious influences, causing an accumulation of bile matter in the blood, or of the lungs causing an excess of hydro-carbonaceous products, or of the kidneys, causing an accumulation of the azotic compounds, it is not until the subsidence of the febrile stage, or rather not until its *decline*, that the symptoms resulting from the disturbed and suspended functions of these organs, manifest themselves, and when once manifest, it is evidence, irrefragable of the localization of the disease in those organs, and of a *failure*, (if the attempt may have been made,) to *abort* the disease. Although I do not much admire the term *abort* as applied to an *arrest of the progress* of yellow fever, yet from its having been sanctioned by high authority, and for the want of a better, I shall adopt it, and proceed to examine in what the process consists, and by what means it may be accomplished. What I understand by *aborting* the disease is, to *prevent* it from becoming *localized*, or *prevent* it from falling upon certain important organs with such force as seriously to disturb or suspend their functions, which is to be accomplished in great part, by directing such remedies to those organs as will maintain them in the exercise of their respective functions during the continuance of the febrile stage; and by directing such remedies to the general capillaries, as to elevate their tone and activity, and fortify them against *collapse*, upon the decline of the fever. It is not to be understood, that the *aborting* process means a *cutting off* of the fever; for, being a fever of a single paroxysm and *self-limited*, it *will* run its course, though, that the crisis of the fever may be hastened by the means used for its abortion I have no doubt. To *abort* the disease then, is to *arrest* it in its febrile stage, and thus prevent the consequences and the manifestation of the phenomena, which are characteristic of other and subsequent stages of the disease. Can this be done; and have we the means for doing it? If not always with unerring certainty, at least, so often, as to render an effort

always necessary and proper, as the *abortable* stage of the disease is the only *curable* one.

In corroboration of my views, and of my observation and experience, I will make a few extracts from a "Report on Yellow fever," by Dr. Daniel Blair, Surgeon-general of British Guiana, which, without disparagement to other writers, is one of the best articles on yellow fever which I have read. He says: "When the epidemic poison was in moderate intensity, or quantity, the results of treatment were highly gratifying. At such times, when the disease was *recognized* and *treated early*, the chances of *aborting* the seizure were very favorable and decisive." . . . "But at times, when the system seemed thoroughly saturated with the poison—when every mucous tissue was more or less *irritated* by it—when no auxiliary or exciting cause was required—when the attack was violent on many points, and spontaneous—when, in fact, the exacerbations of the epidemic became *pestilential*, medication was powerless, and the morbid processes terminating in death were scarcely, if at all, modified or interrupted. The prime object, however, was to *abort the attack*. If that failed, after one, two, or three doses, although still much could be done in putting the patient in the best condition for sustaining the struggle, and keeping off intruding complications, there was little room for active interference on the part of the medical attendant. *Early attention to first symptoms among the susceptible was of priceless value in saving human life.*" Among other instances, Dr. Blair relates, that of ten cases which occurred on a vessel, and received prompt medical attention, *all were aborted*; while three out of four died on another vessel, where treatment had been delayed. "One of the earliest and most uniform effects of the dose in the treatment of aborted cases is the removal of the headache symptom. It is likely that this symptom properly belongs only to the early stages of yellow fever, and that its tendency is to subside spontaneously, but its departure is unquestionably hurried by the agency of the medicine, and the first or second dose is generally adequate to its removal. While the same amount of the compound, given in small and frequently repeated doses, would infallibly cause salivation, such an effect is of the rarest occurrence in the large doses, and when it has happened, never, that I have seen, but mildly. I have prescribed it, without injury, to females far advanced in pregnancy, and to my own infant three and a half months old, in

a similar dose, proportioned to the age, and found it attended with no practical inconvenience of any consequence. The *modus operandi* of the dose in aborting yellow fever, probably, is not by the constitutional effects of mercurialization. Calwell, while accidentally salivated for another malady, got a violent attack, *which was aborted by the usual method*. Three doses were in this case required, and found sufficient, *and without any increase of salivation*. The aborting dose should be used as early as possible. When a state of apyrexia is induced, it may be relinquished—the end is attained; but if the urine has become coagulable, or the epithelium of the tongue has begun to peel, it is of no use pushing it further, the time for its administration is past, and subsequent to this it will be a noxious irritant.”

“From information which we received through the Surgeons of the West India mail steamers, we could see that the use of calomel and quinine in the treatment of the epidemic was not understood, or rather was completely misunderstood, among the West India Islands. We were told that it was pushed on, in various doses and proportions, through all stages, and whether the stomach retained it or not. Nothing could be more injudicious. Its benefits are confined to the first and early stage, and though, if the case run on, some mitigating effects may flow from its previous use, *still it is for aborting the attack completely and at once* that it is prescribed, and is suitable.”

The apology which I have to offer for so long an extract, (if indeed any apology is necessary,) is that it comes from one of much larger experience than myself, and tallies with my own views and opinions, not only with regard to the character of yellow fever, and the power which we possess of *aborting* it, but also with regard to the means by which it is to be accomplished, and confirms what I have previously written with respect to the action of calomel, namely, that *large* doses are usually *safer* and *more efficient* than small repeated doses. Now, the dose of which Dr. Blair speaks as the *aborting dose* was 20 grs. of calomel and 24 grs. of quinine. As to which of these articles, or whether to the joint action of both, the credit of aborting the disease is due, we are left in some doubt. Dr. Fenner, and others, have succeeded in aborting the disease with quinine alone. I, and others, have succeeded in aborting it with calomel alone—at least without the use of quinine; though I must confess, that notwithstanding my greatest



confidence is in the powers of calomel, I would always, when circumstances would permit, call to its aid the powers of quinine. The objects and purposes for the administration of calomel are manifold:—To relieve irritability of the stomach; to excite the liver, and relieve it of bilious engorgement and venous congestion, and thus to diminish its capillary engorgement, as well as that of the stomach, and other organs whose blood passes through the liver; to re-establish or keep up the secretory function of the liver; and last, though not least, by its purgative effect, to aid materially in the removal of the excrementitious and noxious matters from the system. Will calomel do this in yellow fever? My limited experience in three epidemics assures me that it will—though in “*pestilential epidemics*,” in which I have had no experience, upon the testimony of others, and particularly of Dr. Blair, I am compelled to believe that it would fail. Its failure, however, would never deter me from its use, until something more reliable in such cases is found out; for though in ninety-nine cases it should fail, in the one-hundredth it might succeed.

The object and purpose for the administration of quinine is, to impart *tone* to the capillaries, which it unquestionably has the power of doing, and thus it aids the laboring organs in keeping up their secreting, eliminating and depurating functions, and to that extent prevents the *localization* of the disease; or what is probable with regard to its action is, that the *tone* which quinine imparts to the capillaries, enables them better to resist the *irritative action* of the specific poison, and to rid themselves more easily of the consequent engorgement. At all events, it exerts in most cases a decided salutary effect in sustaining the sinking energies of the whole system, upon the *decline* of the fever, whether the case has been aborted or not. These *two* remedies, *first* calomel, *then* quinine, *or both conjoined*, I consider as the cardinal remedies in yellow fever, and all others as auxiliary. They are alike applicable (one or the other,) to all forms or modifications of the disease, being applicable to its *essential* or *sui-generic character*; and whether the disease assume an *inflammatory* character, requiring the use of the lancet, and other antiphlogistic remedies, or *congestive*, requiring the use of stimulants and tonics, these remedies will be alike necessary and efficacious; for, while the modifications which render the use of auxiliary remedies necessary, depend upon extrinsic or adventitious influences which would determine the same modifi-

cations in *other* diseases, and which are consequently *non-essential*; these cardinal remedies are reliable, not from the control which they are capable of exercising over any *particular* modification of the disease, but of the disease *itself* under *every* modification; these regulate the *chameleon*, while the auxiliary remedies regulate *its colors*. I will now, in a few words, state the plan which I adopted for the *abortive* treatment of yellow fever, reserving the more minute details of practice for the *report* of some cases, which I expect subsequently to make of this and other diseases; and reserving, also, what little I may have to say, concerning the latter stage of yellow fever, for consideration, in connection with some other forms of typhoid fever.

If called to a patient in the chill, or before the febrile reaction was established, it was my custom to treat them entirely upon general principles, by enveloping them with blankets and bottles of hot water, or a mustard foot-bath, and if the stomach was irritable, or if I suspected it to be loaded, or containing irritating matter, I *washed* it out with warm water, or a mustard emetic, and as soon as it became quiet, or as soon as the action of the emetic had ceased, I gave from thirty to forty grains of calomel, with from six to eight grains of Dover's powder, mixed in a little brown sugar, as I have described. This dose, if retained, (and it generally will be,) will usually operate upon the bowels in eight, ten or twelve hours, producing one, two, or three large offensive fecal and bilious discharges. If it operated much earlier than this, I immediately repeated the dose, or if it did not operate within that time, (twelve hours,) I gave twenty grains of calomel additional, and in four or five hours a bottle of congress water, a seidlitz powder, or some other saline and magnesian aperient. As soon as the purgative action of the medicine ceases, which large doses will do, (for several hours,) after two or three large discharges, I commence the administration of calomel and quinine, in doses of two grains of the former and three grains of the latter, made into pills and given every two hours, and continue them until the purging recommences, at which time, if the discharges are such as to give evidence of the action of the medicine upon the liver, and the general system is under the influence of quinine, further medication will be unnecessary, at least so far as any efforts to *abort* the disease are concerned, for by this time at least twenty-four hours will have gone by, and the case will either have been abort-

ed, or from the lapse of time will have become non-abortable. About this time, or twenty-four hours from the commencement of the attack, sometimes sooner, sometimes later, the fever begins to decline; at which time I have been in the habit of giving a *few* grains of quinine, and continue to give it at intervals, until the febrile stage has gone by. During the first twenty-four hours, and the *first hours* of the twenty-four, the condition of the skin requires particularly to be observed and attended to, for the reason that it is an index to the character of the disease, and is an important depurating organ, capable of performing vicarious offices for other more vital depurating organs. Hence, the proper action of the skin has the effect of *keeping up* a determination to the surface, and thus preventing the *localization* of the disease, (which in fact is but another term for aborting it,) by diminishing capillary irritation and engorgement, and *perhaps*, to some extent, by eliminating the active poison. I found no difficulty in exciting, or keeping up a perspirable condition of the skin, by the means which were necessary to establish the febrile reaction, by keeping the patient within blankets, and an occasional plain, or mustard foot-bath, (warm of course,) by the action of the calomel, Dover's powder, and quinine, by some warm agreeable beverage, as balm, sage or orange leaf tea, and by an occasional cool or cold and acidulated drink. Much is to be gained, in my opinion, in the *abortive* treatment of yellow fever, by inspiring the patient with confidence in the efficacy of the remedies, as he not only submits to them with greater alacrity, but their action is more certain and favorable under a cheerful and sprightly, than a sorrowful and dejected state of mind, which of itself has a tendency to *localize* the disease upon internal organs. I should have remarked before, with respect to the kidneys, that in the *abortive* treatment they seem to require little attention, for though they are the chief excreting and depurating organs in all acute febrile affections, so long as other organs can be kept in the performance of their work, the kidneys will perform theirs. The result of this abortive plan of treatment with me has been, that of fifty cases, as I have before stated, *two* only failed of being *aborted*. *Two* of the aborted cases had epistaxis, which I ascribed to idiosyncrasy, which I knew they possessed, one of them being my son, and with these exceptions, in every case, upon the purgative action of the medicine, the headache, pain in the back and legs, and other nervous symptoms subsided,



or began to subside, and soon left *no* symptoms characteristic of the disease, *save a single paroxysm of fever prolonged beyond the limits allotted to ordinary intermittent and remittent or periodic fever.*

Yours, as usual,

SAM'L D. HOLT.

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ARTICLE XXX.

*A Case of Cholera Infantum and Convulsions, Treated principally by Water.* By JNO. STAINBACK WILSON, M. D., of Muscogee county, Ga., (near Columbus.)

On the 27th of June, my little boy, a delicate child, six months old, and cutting his first two teeth, was attacked with diarrhoea. This did not receive any attention until Tuesday, 1st July, when the following symptoms presented themselves:—Frequent vomiting of yellow bile, with very profuse serous evacuations from the bowels, intense fever and great heat of head and abdomen. About midnight he was attacked with violent general convulsions, with opisthotonos, which continued at intervals of from three to six hours, until the evening of the 2d. While the convulsions were at their height, and for some moments immediately preceding the muscular contractions, respiration seemed to be entirely suspended, and the little fellow appeared to be in *articulo mortis*.

*Treatment.*—1st morning. A tepid bath; the temperature to be gradually raised to a *hot* bath, after the excitement has been somewhat reduced by the tepid bath; the object being to stimulate the whole skin, and to produce a strong determination to the cutaneous capillaries. Apply sinapism to epigastrium, to be followed by a wet bandage wrung out of cold water, to the whole abdomen; bandage to be renewed whenever it becomes dry or very warm; cold cloths to head, to be changed frequently. Under this treatment the nausea and vomiting subsided, and the intestinal discharges were diminished in frequency, but they were still profuse and watery.

*Evening.*—Fever has increased; restless—tossing from side to side, and biting at the fingers. Scarified gums; used warm, or rather a tepid bath, and cold applications to head and abdomen as before. *No medicine yet.*

After the bath, the restlessness and fever subsided, and he seemed to be doing so well, that we ventured to retire to rest,

when we were aroused about midnight by his convulsive struggles. Tepid bath immediately, with copious cold affusions to head while in the bath. Cold applications to head and abdomen continued, and bath repeated whenever a convulsion comes on, or before the seizure, if there were sufficient premonition. By this treatment the convulsions were gradually diminished both in frequency and severity; and at five o'clock on the evening of the 2d, they took their final departure. The cold cloths were continued about twenty-four hours longer, when the fever also yielded. The only medicine given during the whole attack was, three or four doses of a powder, composed of two grains hyd. cum creta, and about the same quantity of chalk and ginger, with two half grains doses of quinine, on the mornings of 2d and 3d.

*Remarks.*—It is to be feared that physicians, like the Syrian captain,\* in their desire to do “some great thing,” too often overlook the simpler, safer, and even more effective remedies which can be so readily obtained at all times, and under all circumstances; my object, therefore, in publishing this case is, simply to call attention to the fact, that the most formidable diseases may be speedily subdued by water alone; for I am convinced that the medicine had but little, if any agency in bringing about a result so satisfactory.

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ARTICLE XXXI.

*Case of Stone in the Bladder—Operation—Difficulty—Recovery.* By D. S. BRANDON, M. D., of Thomasville, Ga.

On the 5th day of August, 1853, W. B. B., a strong able-bodied farmer, of Thomas county, aged about forty, presented himself at my office for the purpose of having a stone removed from his bladder. The patient's health being sufficiently good to authorize the operation, it was determined upon at once.

The bilateral opening was made into the bladder in about thirty seconds. The stone was seized and an effort made to extract, but without success. Finding the stone a large one, I enlarged the opening with a bistoury, and again attempted to extract. Consid-

erable force was being used when the stone crumbled into fragments. At this I was a little disconcerted, for it was my first operation of the kind. With forceps, fingers and syringe, alternately, for more than two hours, I labored with two of my professional brothers in removing the fragments. At last, to my great gratification and to the infinite joy of my patient, I announced the operation over.

My patient did well until the 12th—some days after the operation—when he got up from his bed, shaved himself, walked over the room once or twice, and returned to bed. I called to see him soon after, and found him suffering with pain in the right testicle. It continued painful through the night and next day. By the 14th, it was swollen three times the ordinary size and still painful; patient had considerable fever. Treated him with calomel and opium, and cold local applications. On the 18th, the other testicle became involved in the inflammation; fever considerable. The urine, which had begun to pass the natural way, returned through the artificial opening again. Calomel and opium in small doses, with cold to the inflamed organs, was continued until the 23d, with no abatement of fever, nor of inflammation—pulse ranging from 95 to 110; tongue coated; great thirst. Having improved but little, if any, by the above treatment, I determined to put him upon the use of *veratrum viride*. The tincture was used sufficiently often to keep the pulse at about 75 to the minute. It caused vomiting but once or twice. The fever and inflammation gave way under its use, with a Dover's powder at night and cold applications; so that on the 27th, my patient was altogether comfortable, the urine passing the natural way, and the wound healing kindly. I discharged him two days afterwards, the wound having healed up to a scab, and his strength being greatly improved.

For two years after the operation he suffered occasionally from inflamed testicles, induced by wet or cold, but at this time I think he enjoys uninterrupted health.

The fragments of stone, (principally phos. lime,) weighed a fraction over three ounces.



*On the Remote Causes of Deafness.* By DUDLEY PEET, A.M., M.D., of New York.

I propose to treat, as briefly as I can, of the Remote and Proximate Causes of Deafness, understanding by the former, those conditions of the atmosphere, country, condition of parents and offspring, etc., etc., which predispose to deafness, and by the latter, those local affections which mechanically or otherwise cause deafness.

Several attempts have been made by different individuals, to collate statistics in relation to the causes of deafness, but from the ignorance of the guardians of the patients, these statistics have proved but very imperfect. An abstract of seven hundred and eighty-seven cases, collected from the institutions for mutes at Paris, Copenhagen, Leipzig, Prague, Cologne, St. Petersburg, Dresden, Hamburg, and Modena, in Europe; and Hartford, New York, Philadelphia and Columbus, in the United States, I will here insert. It is as correct as any that have as yet been published. It may be found in the Eighteenth Report of the New York Institution for the Deaf and Dumb.

#### CAUSES OF ACCIDENTAL DEAFNESS:

|                                       |    |                                        |     |
|---------------------------------------|----|----------------------------------------|-----|
| Scarlet Fever.....                    | 44 | Quinsy.....                            | 1   |
| Typhus Fever.....                     | 3  | Peripneumonia.....                     | 1   |
| Spotted Fever.....                    | 33 | St. Vitus' Dance.....                  | 1   |
| Inflammatory Fever.....               | 7  | Palsy.....                             | 1   |
| Nervous Fever.....                    | 5  | Paralysis.....                         | 1   |
| Nervous Fever and gathering in ears.  | 1  | Syphilis.....                          | 1   |
| Brain Fever.....                      | 4  | Mumps.....                             | 1   |
| Brain Fever, from dentition.....      | 1  | Croup.....                             | 1   |
| Brain Fever, from coup de soleil..... | 1  | Measles and Mumps.....                 | 1   |
| Fever and Fits.....                   | 1  | Small Pox.....                         | 8   |
| Convulsions.....                      | 24 | Injuries of the head.....              | 9   |
| Epileptic Fits.....                   | 6  | Disease in head (not named).....       | 4   |
| Colds.....                            | 26 | Disease in ears (not named).....       | 4   |
| Measles.....                          | 35 | Disease in throat and head (not named) | 1   |
| Gatherings in the head.....           | 15 | Ulcers.....                            | 2   |
| Inflammation in the head.....         | 20 | Falling in the water.....              | 3   |
| Falls.....                            | 19 | Use of calomel.....                    | 1   |
| Scrofula.....                         | 12 | Report of a cannon.....                | 1   |
| Whooping cough.....                   | 12 | Loss of hearing without manifest cause | 4   |
| Hydrocephalus.....                    | 9  | Inflammation of a limb.....            | 1   |
| Hydrocephalus and Whooping cough.     | 1  | Swelling in neck and gathering in ear, |     |
| Bilious Fever.....                    | 1  | with convulsions.....                  | 1   |
| Catarrhal Fever.....                  | 1  | Injury of the ear.....                 | 1   |
| Epidemic Fever.....                   | 1  | Bite of a mad cat.....                 | 1   |
| Intermittent Fever.....               | 1  | Swallowing tobacco.....                | 1   |
| Arthritic Fever.....                  | 1  | Swallowing poison laurel.....          | 1   |
| Fever (not named).....                | 38 | Disease caused by vermin.....          | 1   |
| Foreign substances in the ear.....    | 2  | Injurious medical treatment.....       | 1   |
| Itch.....                             | 2  | Gradual decay of hearing.....          | 2   |
| Dentition.....                        | 2  | Diseases and accidents unknown....     | 398 |
| Humors in the head.....               | 2  |                                        |     |
| Scrofulous Ophthalmia.....            | 1  | Total.....                             | 787 |

This abstract shows the prominent causes to be fevers, the exanthemata, pertussis, convulsions, hydrocephalus, and inflammation

in the head. In regard to the ages at which deafness is most likely to commence, the same authority gives the following abstract of 284 cases:

From birth till 1 year of age, 94 cases of deaf mutes.

|   |               |   |   |   |   |    |   |   |
|---|---------------|---|---|---|---|----|---|---|
| " | 1             | " | 2 | " | " | 73 | " | " |
| " | 2             | " | 3 | " | " | 41 | " | " |
| " | 3             | " | 4 | " | " | 19 | " | " |
| " | 4             | " | 5 | " | " | 27 | " | " |
| " | 5 and upward, |   |   |   |   | 30 | " | " |

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Total, 284

One singular fact, established by statistics, is, that there are more deaf males than females. This cannot arise from the fact, that they are more exposed, for at the age (under five) when they are most liable to become deaf, male children receive the same degree of care as female. The probability is, that more males survive the diseases of youth than females. Of congenital cases of deafness, however, there are more females than males, in the proportion of nine to seven.

There are not sufficient instances known on which to form definite conclusions as to the amount of the hereditary transmission of deafness when one or both of the parents are mutes. There can be no doubt that there is a certain degree of danger. I personally know of only two families, both the parents in each being mutes, in which there is any direct transmission. In each family there are seven deaf and dumb children. I have heard of several other instances, however. Marriages between deaf mutes are, however, not very uncommon occurrences, the children resulting from which possess perfect audition. There seems to be in some families, the heads of which are possessed of all their faculties, a marked predisposition to deafness. Sometimes this is owing to dissipation of one or both of the parents, at the time just preceding gestation, thereby debilitating the vital powers. In other cases, dissipation in youth has been the cause. But of all known causes intermarriage is the most prolific cause of predisposition to deafness. It has been settled beyond a shadow of doubt, that intermarriages of first cousins, and even some of second cousins, give rise to offspring which are generally either of small size, imperfect health, or of imperfect development in some part; they are either idiots, blind, club-footed, or deaf and dumb. And those offspring of first cousins who are not, are rather the exceptions than the rule.

A curious but not very frequent mode in which hereditary predisposition manifests itself is seen in *alternation*. A single case will suffice. In a family of fourteen children, the second, fourth, sixth, eighth, tenth, twelfth, and fourteenth born, were deaf mutes congenitally, while the others could hear and speak. Another case has been recorded, in which the line was only broken by the birth of twins, both deaf mutes. Among other facts shown by the

late census of the United States is, that deaf mutes are more frequently found among white than colored people, while blind persons are more common among the blacks than whites. Mulattoes are more subject to both blindness and deafness than the full-blooded individuals of either race.

That the scrofulous diathesis should be assigned as one of the predisposing causes of deafness, will cause no surprise to any one in the least acquainted with pathology. The *deposition of tubercles* being one of the results of *scrofula*, the latter term has at length become, in the minds of many, so associated with the former, as to be understood as almost synonymous with tuberculosis. Tubercular matter may be deposited in different parts of the ear, it is true, but yet it is so unusual, that to regard it as a curiosity, would be strictly correct. The scrofulous diathesis, however, so affects the whole body that inflammation is easily excited in any organ; this inflammation is of an unhealthy kind, slow to heal, producing an abnormal pus, and exceedingly liable to take on a chronic sub-acute character.

When the ear of a strumous patient becomes inflamed, deafness is almost certain to result, unless proper medical treatment be at once resorted to. The mucous membrane becomes thickened, red, pulpy, a purulent effusion is poured forth, constituting what I shall hereafter speak of as strumous otitis, and, if the membrana tympani be at the same time perforated strumous otorrhœa. The mucous membrane of the membrana tympani is thickened, thus greatly impairing its functions, as is also that of the Eustachian tube, thus preventing the free access of air to the middle ear. When we examine the delicacy of the apparatus of hearing, it is truly wonderful that even in grave cases of inflammation, the hearing is not immediately and totally lost. And yet the mucous lining of the *cavitas tympani* is often so thickened, that it would seem impossible for the membranes of the *fenestra ovalis* and *fenestra rotunda* to be of the slightest use in conveying the vibrations to the internal ear, the degree of deafness resulting therefrom, being at the same time, by no means commensurate with what we should have good cause to expect. Scrofula, as a predisposing cause of deafness, acts then, almost always, merely as a predisposing cause of inflammation in general, which inflammation, being excited in the ear, produces changes resulting in deafness. These strumous inflammations are not rare. They are very common among children, almost as much so as strumous affections of the eye. Those of the deaf and dumb who are scrofulous, form a large proportion of the whole number, and the proportion is not much less among those who are deaf, but who have lost their hearing so late in life as not materially to affect their speech. It is evident, then, that whatever is calculated to engender the scrofulous habit, is indirectly a cause of deafness. Among these causes may be mentioned, living in imperfectly ventilated, poorly lighted, and damp habitations; living in wet locali-



ties or in a climate subject to great or sudden variations of heat and cold, dryness and humidity. In mountainous countries, a great deal depends on the altitude of the habitation; thus in Switzerland it has been ascertained that those who live in the valleys are far less healthy than those who live high up on the mountains; the disproportion of cretins between the two mentioned classes of localities being exceedingly great. The number of deaf persons in Switzerland is much greater in proportion to the number of inhabitants than in any other country in the world where statistical knowledge has been obtained. In Belgium, Holland, and Saxony, the proportion is much less; these latter countries are level and dry. In the South of Europe, the number of deaf persons is less than in the colder countries of the North. A case has been recorded in the Paris Institution for the Deaf and Dumb, of a family of eight children, five of whom were congenitally deaf and dumb. These five had been born in a very damp dwelling. A family which previously had resided in the house, had three children, two of whom were deaf and dumb.

It has been a disputed question since the days of Hippocrates, whether the pregnant is able to transmit to her offspring peculiar traits of mind or conditions of body, as the result of a persistent melancholy mood, or mental anguish, or as the consequence of a sudden fright or disgust during any period of her pregnancy. The affirmation of this problem has been, and ever will be, considered by the vulgar of every nation as indubitable, no superstition or tenet being more universally believed; so much so, that Shakspeare, in many places, alludes to this belief. But whether, or no, deafness has ever been the child's misfortune through the mother's fright, I leave others to judge after the perusal of the following statements, which I have collected from files of "Questions to Parents and Guardians of Deaf Mutes." These questions were issued from the office of the Secretary of the State of New York, and are preserved in the New York Institution for the Instruction of the Deaf and Dumb. The facts I am about to state, are to be found in answer to the second of the "questions," which is as follows:—"Was your child born deaf? If so, was there any cause which is supposed to have operated before birth?"

*First Case.*—A. M., the daughter of L. M., a physician in this state, is a fine, sprightly girl, in excellent health, having no bodily infirmity with the exception of deafness and the dumbness consequent on the loss of hearing. There has never been in any of the collateral branches of the family, a single case of deafness. She, however, is congenitally deaf, and her deafness is ascribed to the fact that her mother while pregnant with her, was frightened by a deaf and dumb man, who boarded in her family.

*Second Case.*—C. P. E., is a boy of perfect health, and no physical defect except his deafness. The cause of this deafness is ascribed by his parents to the fact, that a few months before the

mother was delivered, she saw a deaf and dumb child. It must be acknowledged, however, that this is not a sufficient cause of deafness, as the mother was afterwards delivered of a boy, who was also deaf and dumb, and who died at the age of ten. One of the great-aunts and great-uncles of this boy were deaf and dumb. The parents were second-cousins. That these additional facts establish the existence of other causes than the one assigned, sufficient of themselves, to account for the deafness, there is no question.

*Third Case.*—M. G., is the daughter of an intelligent tanner and currier, who gives the following statement:—"She was born deaf. I (the father) do not know of any other cause than the following: My wife is a Catholic, and while in pregnancy with Melissa, wished to go to confession; I refused to let her do so, at which she was offended, and would not speak to me for nearly a week, which time was about five or six months before the birth of Melissa. I was ignorant at the time of my wife's pregnancy, else I should have avoided any opposition to her wishes." There are two other children in the family, both of whom are in possession of all their faculties. The father has "tried to remove her deafness, by the use of refined sweet-oil, which caused extreme pain, without any apparent benefit to hearing." Dew-water was also tried, "which caused no pain, and seemed to relieve the head-ache she was formerly troubled with." The trial of refined sweet-oil, has thus added to medical lore the important fact, that the not going to confession, is apt to leave considerable inflammation in the ears of the progeny. Verily, the sins of the parent are visited upon the children, (unless confession is duly made,) as is abundantly shown by this instance of the hereditary transmission of moral turpitude.

*Fourth Case.*—S. A., is a healthy girl, of a family in which there is no hereditary taint. Her mother, sometime before the birth of the infant, saw a little foolish child, the vision of which is supposed by the parents to be the sole cause of deafness.

*Fifth Case.*—J. S., was born deaf, and there has been no apparent cause assigned, except that his mother while *enciente* "saw a deaf and dumb man acting." There is no other cause of deafness in any of the collateral branches of the family. There are seven other children, all of whom are perfect in body and mind.

*Sixth Case.*—E. S. Y., was deaf from birth. The family is free from any taint likely to produce deafness. None of the exanthemata have attacked him, with the exception of the kine-pox. The mother, during the early part of her pregnancy, became very much excited, so as to be unable to speak, and ascribes the deafness of her child to this cause.

*Seventh Case.*—I. M. The only reason assigned for the deafness of this boy, is contained in the following account given by the mother:—"I lost a son three weeks previous to the birth of this deaf son. The dying child kept calling for me. The friends pre-

sent thought it not proper for me to witness its struggles. To prevent me from hearing the cries of the child, I put my fingers in my ears, and, so far as I could, stopped my hearing. Three weeks thereafter my child was born deaf and dumb, and has remained so ever since." This woman has had four children by her husband, (a convict in the state prison, and who has, since his release, deserted his wife,) and two by another man with whom she is at present living. All these children can hear and speak, and there is no other case of deafness known in any collateral branches of the family. There is no relationship between the parents.

*Eighth Case.*—This is a boy by the name of L. McK. H., who was born deaf and dumb. During the days allotted to his mother, one of the older children in the family hurt his shoulder, and it became necessary to lance it. The mother, fearing to see the operation, went some distance from the house, and in order that she might not hear the screams of her child, placed her fingers in her ears, and she says, "immediately experienced sensations which she could not describe." This is the cause assigned by the mother for her son's deafness. It may not be improper to add, however, that an uncle of the father of this lad was born deaf and dumb, and also a cousin of the mother, thus showing an hereditary disposition to deafness, which, much more likely than the above incident, was the cause of this infirmity. Six other children are in the family, none of whom are deaf and dumb.

*Ninth Case.*—J. W. P., was born deaf, and the mother assigns as a reason, that while with James, a child was placed in her arms to be fondled. The infant very suddenly expired, and she became so exceedingly frightened, that she believes the deafness of her child was induced. There are no other causes known by me for his deafness.

*Tenth Case.*—This is a case of congenital deafness in a bright, sprightly lass, perfect in all her faculties except hearing and speaking. The only cause for her deafness that I can find assigned, is contained in the following sad, yet interesting, narrative:—The father of this child had seduced the mother, under the promise of marriage. The situation of the mother being known, he promised to perform his duty, and legitimate the offspring. For some reason or other, the marriage was not immediately consummated, but the time for it was definitely settled a few weeks before the birth of the child. A few days before the wedding was to have taken place, the father went to work in a neighboring field, and while engaged in cutting down a tree, was instantly killed by the fall of it. The unfortunate mother on hearing the sad tidings, was rendered distracted with grief at the loss of her lover, and shame at her miserable condition. Hastening to the side of the dead man, she called upon him to speak to her once, if only once, more. This she did constantly in her frenzy, until torn away from him by her friends. Being confined shortly afterwards, she was de-



livered of a female infant, which has since its birth neither heard or spoken. And she ascribes its deafness to the efforts she made to hear the voice of her intended husband.

A case is mentioned in a report printed in the year 1837, of a boy, which at the time attracted considerable attention. The meatus auditorius externus was entirely wanting, and the auricle reduced to a mere projecting cartilage. The face and head were also deformed, but intellectually he did not appear to be deficient. The occasion of his deafness and deformity, "is supposed to have been fright on the part of the mother during the period of gestation, from a piercing shriek uttered by a servant. The distressing effect upon the ears of the parent, is believed to have caused those of the child to be closed up. This individual hears imperfectly, on opening his mouth, through the Eustachian tubes; and by this means he has, to a trifling extent, learned to articulate." The report suggests the practicability of opening the external orifice of the ear. I believe the operation was never performed.—[*N. York Journal of Medicine.*

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*On a new mode of Reducing Strangulated Hernia.* By BARON SEUTIN.

Baron Seutin declares, that with his mode of reducing strangulated hernia, which he has now practiced for twenty years, he hardly ever in his large practice finds it necessary to have recourse to an operation.

The patient is laid upon his back, with the pelvis raised much higher than the shoulders, in order that the intestinal mass may exert traction upon the herniated portion. The knees are flexed, and the body is slightly turned to the opposite side to that on which the hernia exists. The surgeon ascertains that the hernia, habitually reducible, cannot be returned by continuous and moderate taxis. He next seeks with his index finger for the aperture that has given issue to the hernia, pushing up the skin sufficiently from below, in order not to be arrested by its resistance. The extremity of the finger is passed slowly in between the viscera and the herniary orifice, depressing the intestine or omentum with the pulp of the finger. This stage of the procedure demands perseverance, for at first it seems impossible to succeed. The finger is next to be curved as a hook, and sufficient traction exerted on the ring to rupture some of the fibres, giving rise to a cracking very sensible to the finger, and sometimes to the ear. When this characteristic crack is not produced, the fibres must be submitted to a continuous forced extension, which, by extending them beyond the agency of their natural elasticity, generally terminates the strangulation. This mode of procedure is more applicable to Gimbernat's ligament, the hooking and tearing of which are more difficult than in the case of the inguinal ring. Considerable strength has sometimes to be exerted, and the index finger becomes much

fatigued. When, in consequence of the narrowness of the ring, the finger does not at once penetrate, it is to be pressed firmly against the fibrous edge, and inclined toward the hernia. After a time the fibres yield and the finger passes. When the finger becomes fatigued it is not to be withdrawn, but it should be supported by the fingers of an intelligent assistant, who seconds the action it is desired to produce. In inguinal hernia, the traction should not be exerted with the finger upon Poupart's ligament, but in a direction from within outwards, and from below upwards, by which the aponeurotic layers between the two ligamentous pillars constituting the inguinal aperture are easily torn through.

The ring is then enlarged by this tearing, just as if it had been divided by a cutting instrument, or largely dilated, and reduction takes place easily, by performing the taxis in a suitable direction. The mobility of the skin, its laxity in parts where hernia prevails, and its extensibility, greater in proportion to its thinness and to the absence of a lining of fatty cellular tissue—by allowing the sliding and thrusting of this membrane in front of the finger it cushions, affords protection to the intestine from all immediate contusion. When the strangulation is induced by the issue of a considerable mass of intestine, or an accumulation of faecal matters, it is desirable first to disengage one of the extremities of the noose, and to seek to expel the gas or faecal matters by moderate pressure, in order to facilitate the reduction of the tumor. In the few cases in which the finger cannot be introduced, a small incision may be practiced in the skin, and the handle of a spatula or any blunt instrument may be passed in by separating the cellular tissue. Pressing this against the border of the ring, while avoiding the intestine, this orifice may be eroded or dilated without danger. The greater the resistance offered by the aponeurotic fibres, the greater will be their tension, and the more easily will their laceration be produced.

As a general conclusion, it may be laid down, that the facility and promptitude of this procedure, and the immunity that attends it, ought to diminish the gravity of the prognosis of strangulated hernia, by rendering the circumstances under which recourse need be had to an operation quite exceptional. Such exceptional cases will be found (1) in old irreducible herniæ. (2.) When the strangulation in inguinal hernia occurs at the internal ring. Generally the external ring and inguinal canal are large, and allow of the easy penetration of the finger: and then the new method is applicable, and the rupturing or dilatation of the internal ring should be attempted, and the manœuvre is rendered the easier by the fact, that in these cases the canal is much shortened, and the two rings much approximated. If, however, the external ring is too narrow to admit the finger, an operation is required. (3.) When there are general symptoms of a gangrenous state of the intestine.—[*Bull. de Thérap. British and For. Med. Chir. Rev.*

*Local Anæsthesia by Congelation.*

Dr. H. L. Burpee, in the April number of the Dental Recorder, thinks that direct application of cold causes too much pain to a vital tooth or one in an inflamed condition, to be adopted into general use. He states that he has adopted into his practice an apparatus with which he extracts teeth without pain, but that it requires a longer time to effect the object than the one invented by Dr. Branch, "by commencing with warm water, and graduating the cold at will, by which process the patient suffers nothing actually in the application, and seldom any pain is felt in removing the tooth." The time required is from one and a half to two and a half minutes. "This apparatus consists of a combination force pump, by which two fluids (warm and cold) can be thrown together or separately, through a flexible tube, into a mouth-piece covering the tooth and surrounding the gum, (the muscles of the face and tongue being protected by a non-conductor,) and passing off through a flexible tube leading to a vessel placed in a convenient position to receive the waste fluid." Dr. Burpee thinks that there are cases where different applications of cold may be used, to those teeth or roots which have lost their vitality. He remarks, that the danger to be incurred in anæsthesia by congelation, is as nothing compared to ether and chloroform, and that the results are quite as satisfactory, "and that it leaves none of the ill effects;" "that the patient is relieved from much dreaded pain and anxiety of mind."—[*Am. Jour. of Dental Science.*]

*On the Influence of Phosphate of Lime in the Production of Callus.*

By M. A. MILNE-EDWARDS.

The question of aiding the formation of callus by the administration of phosphate of lime has recently been revived in Paris, and the author of this paper alludes to some experiments tried by M. Gosselin at the Hôpital Cochin, especially in cases of fracture of the arm, which are sometimes so long in uniting. In the six cases observed by him the result seemed satisfactory, inasmuch as the apparatus could be removed in from twenty-seven to thirty days, the fracture appearing quite consolidated. As, however, in these cases, the condition of the callus could not be verified, M. Edwards undertook a series of comparative experiments on animals. Fractures as nearly as possible alike were executed upon dogs and rabbits of the same size and strength, to some only of which the lime was administered. The phosphate employed was prepared by the calcination of bones, and consequently was combined with carbonate. The results were decidedly favorable; and the author believes that the phosphate may be usefully employed as an adjuvant, expediting the union in ordinary fractures, and tending to prevent the non-consolidation of others.

From another communication, (*Gaz. des Hôp.*,) it appears that



in one of M. Gosselin's cases of fracture of the lower third of the humerus, complete consolidation occurred in thirty days. He administers as a minimum dose half a gramme per diem.—[*Comptes Rendus. British and For. Med. Chir. Rev.*

*New Operation for Paracentesis in Dropsy.*

A new mode of "tapping," or performing the ordinary operation of paracentesis abdominis, recently adopted by Mr. Birkett, deserves a word of notice. Every surgical practitioner must be aware how commonplace and uninteresting this operation has become, and how very like the analogous process as regards a beer barrel; thus justifying in some measure the association of ideas with which the literal acceptance of the term, the process of "tapping," has come to be regarded by students and surgeons in operating theatres. Mr. Birkett proposes that the fluid should flow away by a piece of vulcanized India-rubber tube being slipped over a sort of flange on the canula, through which the trocar is passed; this piece of India-rubber tube fitted on to the further piece of tube of any convenient length, so as to carry the fluid away from the patient's bed. The finger and thumb are applied to the smaller piece of India-rubber tube, which is compressed firmly as the trocar is withdrawn, and this tube, then fitted on to the longer piece of tube. The very unpleasant sound of a flowing stream of fluid is thus done away with; and where patients are not able to sit up to have the operation performed, it suits most admirably. It prevents air also, as in paracentesis of the chest, entering into the cavity.—[*N.Y. Jour. of Medicine.*

*Chorea.—Inhalation of Chloroform.*

According to Dr. Géry,\* chloroform inhalations have been used with advantage at the Hôp. des Enfants in severe cases, where the violence of the movements have been beyond the control of opium or belladonna. It has been found at once to calm the movements and produce sleep, and in this way time has been gained for the employment of other remedies. On the first application of the vapour, the intensity of the movements is often greatly increased, but a calm succeeds as the inhalation is continued. Sound sleep thus induced lasts in children for ten or fifteen minutes, or even half an hour, and no ill effects have been observed to follow. The usual precautions, however, which are taken in the instance of adults, are necessary to be observed, such as ensuring that the stomach be empty, removing all obstacles to the respiratory movements, and watching the respiration and pulse, &c. The usual quantity administered has been ten to twenty grammes.

Dr. Bouchard† relates a case of a girl, in which severe chorea

\* Bull. Gen. de Therap. March, 1855.

† Ibid. July, 1855.

had lasted twenty-one days. She was subjected to the influence of chloroform twenty seven times in fourteen days, at first twice, then three times, and lastly once a day, at the end of which time she was cured.

*Chorea.*—The *gymnastic treatment* of chorea has already been discussed in this journal, and we now subjoin the conclusions drawn from an extended experience of its use in the Hôpital des Enfants by M. Blache.\* 1st. No other method of treatment applied to chorea has produced so large a number of cures as the gymnastic treatment either alone or associated with sulphurous baths. 2d. It may be employed in almost all cases, without being arrested by the various contra-indications which present themselves at each step in the use of the other remedies for the disease. 3d. The cure is obtained in a mean number of days about equal to that which the sulphurous baths require, but it seems to be more lasting, and the diminution of the affection is exhibited from the first. 4th. At the same time that the disorder of the movements disappears, the general health of the children sensibly improves, and the patients depart not only cured of the chorea, but also of the anæmia which most frequently accompanies it. 5th. The gymnastic exercises, which might be regarded as perilous, especially in the instance of the children who are submitted to them, present no danger at all, and may be put in practice without inconvenience in all seasons, an advantage which the baths do not possess. 6th. It is important to divide the exercises into two categories—*a*, the *passive* exercises, which can alone be employed in that period of the affection where the will has no influence over the muscular powers; and *b*, the *active* exercises, which the children execute themselves, either with or without the aid of apparatus.—[*Brit. and For. Med. Review.*]

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*On the use of the Oil of Turpentine, with Cod-liver Oil in Ophthalmia.*  
(Translated from Rev. Thérapeutique by the Editor.)

Some years since, Holbert, in his department of the Hospital at Hambourg, tested the value of oil of turpentine in syphilitic iritis. M. Becker had already used it in rheumatic iritis, in which he found it exceedingly useful. Since then he has used it in other obstinate ophthalmias, and recently, in order to facilitate its use, he prescribes it in combination with cod-liver oil. He has given a spoonful dose every hour of the following mixture:—4 grammes of pure oil of turpentine (rectified) with 30 grammes of cod-liver oil, in a very bad case of catarrhal ophthalmia. He has used the same mixture for a contagious ophthalmia, which had resisted medical treatment for six weeks; afterwards, at the end of six days, he substituted camphine, which is made by distilling the oil of turpentine from the hydrate of lime. At the end of two weeks,

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\* Rev. Med. Chir. August, 1855.

the left eye was clear, the conjunctiva slightly red, and at the right there was slight opacity of the cornea, with the granulations much diminished. After four weeks the eye was well. During this time the patient had taken 20 grammes of the essence of turpentine, and a mixture of 80 grammes of camphine, with 100 grammes of cod-liver oil.—[*Annales d'Oculistique. Phila. Med. & Sur. Jour.*

*Pneumonia, Asthenic or Passive form of; Treatment by Quinine.*

Dr. Corrigan, in an interesting clinical lecture, (*Dublin Hospital Gazette*, July 15, 1856,) makes the following practical remarks:

I have two objects in view in this lecture; first, to impress on your minds, gentlemen, this position, which you ought never to forget, viz., that the name of a disease is not a sufficient guide either as to the nature or treatment of a case; and, secondly, to draw your attention to the treatment of certain forms and stages of pneumonia by quinine, both on account of the importance of this treatment, and of the cases before us forming a good illustration of the first point.

Medical students are very apt to fall into the same mistake as is occasionally fallen into by botanists, florists, and conchologists, viz., fancying that when they have acquired a knowledge of names they have acquired a knowledge of the nature of the objects of their studies; but the mere knowledge of the name of a plant, or a shell, or a flower, gives no more acquaintance with their respective natures than was possessed previously. You must avoid such a mistake in medicine, for its consequences would be too serious; and yet I am sorry to say that this error prevails very generally among our students, and it is because I see it prevail so generally that I feel myself called upon, even in the middle of a session, to notice it, and to warn you against it. I know it prevails, because I see the great tendency there is to substitute book-reading and knowledge of names of diseases merely, for the more troublesome task of reading disease in nature's book at the bed-side. The mere acquaintance with names, and the rules for treatment, will enable you to pass a very creditable examination, and even to win examination prizes, but it will not make you practitioners; and you should ever bear in mind that the passing of an examination with credit, and the obtaining a degree, are not to be your main objects. They are only the means to an end; that end is station in your profession, and its result competency; and believe me the only way to acquire both is to acquire a knowledge, not of the names, but of the intimate nature of the objects of your study.

Let us now proceed with the illustration of our first point, that *the name of a disease is not an index to its nature or its treatment.* With the name of "pneumonia" you generally and properly associate the ideas of sthenic vascular action of the capillaries, of throb-



bing of the arteries, increased action in frequency and strength of the heart, and with the accompanying symptoms of flushed face, pink lips, hot breath, burning heat of skin, high-colored and scanty urine, and orange-colored viscid sputa. With these there will be naturally associated, as to treatment, bleeding and tartar emetic, those remedies that possess such power over high inflammatory action and over pneumonia, as we have sketched it; but if you were to imagine that the name "pneumonia" always indicated the same nature in the disease going under its name, you would fall into a very grievous error in knowledge and in practice. Pneumonia occasionally means a state of disease the very opposite in character to the picture first drawn, and requiring a very opposite treatment. It is this knowledge, so as to recognize the altered character of the disease, which you can only learn in clinical study.

To make my observations as simple and as easily intelligible as possible to you, I will confine my observations to what is usually called the first stage of pneumonia, that is the state in which, if a patient die, the lung will be found dark-colored, from the great quantity of blood contained in it, its capillaries congested, distended frequently beyond their natural calibre, its smaller air-tubes loaded with effused fluid, and the whole lung pitting on pressure and much heavier than natural. Bear in mind next, the peculiar structure of the lung, resembling, as it were, two large sponges, made up nearly altogether of a great congeries of vascular capillaries, the capillaries of the pulmonary artery, loaded with venous blood, and those of the pulmonary veins with arterial blood.

Now let me recall to your mind one of your earliest physiological lessons. If the capillary vessels of the web of a frog's foot be stimulated, the effect of the stimulation is very soon to cause a distension of the capillary, and a more rapid movement in the contained blood. This, along with the momentary preceding contraction is its sthenic state, for all that is necessary to enable it to return to its healthy state, is to withdraw the stimulant, and the capillary contracts of itself. But if the distension and stimulation be continued another phase occurs: the blood becomes darker, the circulation becomes slower, the capillary has lost its power of contracting, and, to enable it to return to its healthy contractile state, the application of some stimulant is required, when under its influence the capillary regains its lost power, and it again returns to its previously healthy state.

Now, this simple experiment is really the key to the sthenic and asthenic states of the vascular system, and is the foundation on which we rest our principles as to the treatment of pneumonia, which I bring before you in this lecture.

Carry your mind's eye from the experiment on the frog's foot to what goes on in some forms and types of pneumonia, and you can no more doubt of what is taking place in the lung within the interior of the chest, than you can doubt your ocular evidence of

what you see in the experiment. In the first stage of an attack of pneumonia, in a healthy constitution, with the whole capillary system, including, of course, that of the lungs in possession of its ordinary vigor, the capillaries become distended, but still preserve their sthenic state. In such a case the line of treatment is at once indicated: venesection, to relieve their over-distension, and tartar emetic, to act upon them and upon the whole vascular system, including heart and arterial and capillary system, are the great means of treatment upon which we rely. But if, from the state of constitution, or from the epidemic type of disease at the time, the capillaries do not retain their sthenic tone, they pass into the state exemplified in the experiment on the frog's foot, they lose their contractile power, and we have then to deal with quite a different state—with an immense mesh of pulmonic tissue, formed nearly altogether of capillaries that have lost their contractile power, and in which further depletion will be not only useless but injurious, for while its effect in lessening the distension would at best be doubtful, it would tend still further to aggravate that asthenic character which they now present; and extension of the disease, increasing debility, exhaustion, and death will follow. It is to meet the supervention of this second or asthenic stage that you have seen me exhibit quinine in large doses; the result has been satisfactory, and it is the more satisfactory to know that its employment has not been a mere empirical experiment, but has arisen from considering the physiological state of the capillaries in the lungs, as illustrated by a physiological experiment, and revealed to us by an analysis of the symptoms. I will now shortly notice some of the cases.

The first case that suggested the treatment occurred in private practice. The patient was a man of about thirty-five years of age. He was attacked by pneumonia of the right lung; he was a man of rather full habit, and flabby texture. The physical signs were the ordinary ones of the first stage. The constitutional symptoms did not indicate any very high degree of vascular action, and the treatment was of the usual kind, cupping, blistering, and calomel and opium. About the fifth day there was every symptom discouraging in this case. He became slightly jaundiced, or rather assumed a yellowish, sallow cast of countenance, the pulse became very full, very soft, and very yielding, and the expectoration presented the appearance of softened down dissolved blood. The lung had not passed into the second stage of the disease. He appeared now to be rapidly sinking, and it then occurred to me to administer quinine, guided by the principles that I have already explained. He got five grains of quinine every three hours, and the alteration in twenty-four hours was very marked indeed. The same treatment was continued for the next day, and within three days more he was out of danger. I never treated a case in which I was more satisfied of the efficacy of the medicine.

In this case the disease set in presenting a moderate degree of the sthenic form, but the capillaries speedily lost their contractile power, and then the asthenic form rapidly succeeded. Quinine appears to possess the same power in giving contractile action to the capillaries of the lungs, which we know it possesses in so marked a degree over the capillaries and venous radicles in the spleen, and it may further support this view to recollect that both in lungs and spleen the capillaries are in a very large proportion venous.

This asthenic form of pneumonia may, however, exist from the very commencement of the attack, that is, either from type of disease, from nature of constitution, or from long-continued action of depressing influence, the capillaries of the lungs may lose their sthenic power from the very onset, and thus we may have asthenic pneumonia either as the second stage of sthenic pneumonia, or we may have it as the primary disease.

James Hays, *ætat.* 21, previously a healthy man, was admitted into the Hardwicke Hospital on the 24th of March, 1856, complaining of pain in the right side, and of great dyspnœa. On examination, double pneumonia was discovered, both lungs were extensively engaged, but the disease had not gone beyond the first stage; there was extensive crepitation with bronchial respiration. The pulse was extremely rapid and small. The debility was extreme, and the surface of the body was pale and rather cool. He presented very much the appearance of a dying man. He was a boatman, constantly exposed to wet and cold, and for four days had been suffering under his illness, and all this time had lain in a canal luggage boat, on its way to Dublin, in extremely inclement and cold weather.

In the night the dyspnœa became so urgent that he seemed on the point of suffocating; from this he was somewhat relieved by draughts of ether and by wine. A blister was applied to his chest. The next day he was ordered five grains of sulphate of quinine every three hours, and the quinine was continued. On the 29th he was so much improved that the quinine was diminished to a dose three times a day, and his convalescence then set in. I merely give you these cases in illustration of the disease and of its treatment; you have seen a great many cases of a similar kind treated here on the same principle during the past winter and spring, and I will now briefly sum up in propositions what I wish to impress on you in this lecture.

1. That the name of a disease is not an index to its treatment; but that on the contrary, under the one name, the pathological conditions of the organ affected may change so much, as to require the most varying or even opposite mode of treatment.

2. That pneumonia presents an illustration of this principle, as it may be of a sthenic or an asthenic form.

3. That the asthenic form may be consequent on, or be the se-



cond stage of the sthenic form; or that the primary attack of pneumonia may be of the asthenic form from the commencement.

4. That quinine in large doses is a remedy of great power over the asthenic form of pneumonia, whether it be primary or secondary.

I have only to add, that these observations as to the pathology and treatment of this form of pneumonia have reference to the disease in the stage of extreme congestion, or what is commonly called the first stage of pneumonia.—[*Am. Jour. Med. Sciences.*

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*On Gangrene from Arteritis.* By Professor PORTA.

The following are some of the conclusions arrived at by Professor Porta, from the observation of thirty-one cases of his own, and the consideration of those published by others:

Although the tunics of arteries consist of tissues little disposed to inflammation, yet they are not exempt from liability to it; and external violence, the extension of phlegmasia from other tissues, rheumatism or metastasis, may induce an arteritis that may lead to gangrene of subjacent parts. Among all these causes, metastasis is pre-eminent, so that eighteen out of the thirty-one cases are referable to it. Not infrequently on the decline or disappearance of some serious internal malady, a reverberation is directed to the arteries of the limbs, the original disease either then disappearing, or remaining as a complication of the newly developed arteritis. The large external arteries, such as the axillary, humeral, femoral, or popliteal, are usually the subjects of such reverberation, but it has not as yet been met with in the carotid. Exceptionally smaller arteries, are attacked, such as the radial, ulnar, or tibial.

The end to which arteritis tends is the closure of the artery, all the manifestations observed subsequent to the cessation of its pulsation being but the sequelæ of that. Strictly speaking, however, such cessation of pulsation is not pathognomic of obliteration, as sometimes a minute stream continues to pass, which excites so feeble an oscillation of the vessel as not to be perceptible to the touch. The obstruction of the artery does not necessarily give rise to gangrene, for not only may it be incomplete, but even when complete it may have been formed with sufficient slowness to allow the development of the lateral anastomoses; the amount of the obliteration, indeed, exerting less influence than the rapidity with which the coagulum is formed. This local condition is not the sole cause of the gangrene, for the production of this may be favored by a disordered state of the general circulation, or a temporary enfeeblement of the cardiac impulse. There is, however, no lesion of the function of the capillaries operating, as the minute vessels are found healthy and empty in the midst of the gangrened parts, just as they are in mortifications that supervene upon ligature.

Gangrene from arteritis presents a great analogy to senile gangrene, which may take place slowly or rapidly, according to the amount of ossific deposit, and the other conditions of the subject.

There is nothing constant observed as regards the form, extension, or duration of this result of arteritis. Sometimes the patient dies during the prodromic stage, in consequence of the rapid exhaustion of his powers before the limb has mortified. In other cases there are eschars, limited to the skin; or the gangrene may attack only one or more toes. Frequently, however, it extends to the foot and leg, or the hand and fore-arm, until the power of the lateral circulation restores the equilibrium, if it succeed in so doing. If even it is arrested, there is a disposition to relapse; and a paresis, and temporary or permanent atrophy of the limb, remains. Danger to life, however, is not alone dependent upon the degree of extension of the gangrene, but also upon the general state; this allowing us sometimes to hope for recovery in even extensive gangrene, while at others it renders a limited gangrene a most grave circumstance. So dangerous an affection is it, that few succeed in escaping from its effects.

Besides the internal changes that may exist as the effects of the malady which has also caused the arteritis, we often find in the artery supposed to be affected but slight traces of lesions. In bad cases, however, a sero-gelatinous fluid is found external to the artery, the cellular coat is finely injected, and the proper tunics are adherent to each other, and fragile. Sometimes there is thickening of the cellular tunic, and exudation of puriform matter or plastic lymph, externally to the vessel, affixing it to neighboring parts. All these lesions are not of frequent occurrence in arteritis; and except in the case of violence, all the coats of the vessel may present a normal appearance, and they would be so pronounced, were it not for the obstruction caused by the product of inflammation. This consists of a solid coagulum of plastic lymph, varying in size, length, and degree of adhesion to the vessel. Sometimes small coagula are observed obstructing the artery at intervals; but more commonly it is a single coagulum, one or more inches in length, converting the vessel into a cord. Sometimes, however, the coagulum assumes the form of a canal, or presents here and there small lacunæ, containing a milky or semi-fluid reddish matter, which may also cover the whole surface of the coagulum, or almost constitute its entire substance. Maisonneuve and Cruveilhier have found even the smallest vessels corresponding to the gangrened part obliterated; but, for the most part, the closure will be found only in the vessels above the gangrened part, those corresponding to this remaining open—showing that the coagulum has preceded the gangrene.

The principal veins of the limb sometimes participate in the inflammatory condition, and exhibit the signs of this more plainly than do the arteries. Their coats become thickened, and rich in

vasa vasorum: while their cavity is filled with lymph, or, oftener still, by puriform matter combined with cruor. In ordinary cases, however, the principal veins remain free, contain a small quantity of blood, in part fluid, and in part coagulated, or, without exhibiting any signs of phlegmasia, are obstructed by a sanguineous coagulum.

As the arteritis is unpreceded by any prodrome, no prophylactic can be employed; but in order to prevent or circumscribe the formation of coagula, the arteritis itself must be actively combated by antiphlogistic means, general or local, according to the amount of reaction and the condition of the patient. These must, however, be employed with due caution; for while we combat the inflammatory action, we have to favor the lateral circulation. As soon as the more urgent symptoms are mitigated, aromatic fomentations or warm applications should be made to the part, improving the patient's diet, and even exhibiting stimuli, if not specially contra-indicated. If the pain is violent, opium is here, too, of great use. These means are, however, often of no avail; for the arteritis, especially when metastatic, appears suddenly, gives rise to the exudation, and at once disappears; gangrene following if the lateral circulation cannot resist, and leaving to the practitioner only the office of administering palliatives. So, too, all attempts at dissipating the coagulum are useless, this remaining even in the case of recovery; and all that can be done is to endeavor to limit it by favoring the lateral circulation. Even in the case of recovery, until the circulation is completely re-established, there is great danger of relapse.—[*Brit. & For. Med. Chir. Rev.* and *Omodei An. di Med.*

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*On the Comparative Value of Amputation at the Knee-joint and of the Thigh.* By M. BAUDENS.

M. Baudens states, in a recent communication to the Académie des Sciences, that the above question is one of those that have engaged his attention during his directorship of the French army in the East. He found that the opinions of all the medical officers whom he consulted, whether in the Crimea, at Constantinople, or the military hospitals at Marseilles and Toulon, were in favor of disarticulation of the knee whenever the amputation of the extremity could not be performed below the patella. And, in fact, the disarticulation of the knee has succeeded in a given number of cases oftener than the amputation of the thigh, even when performed at the lower third. But the disarticulation is only to be preferred upon one express condition—viz., that it be performed immediately after the receipt of the injury. Consecutively, amputation of the thigh should be preferred. This second statement agrees in every respect with all that he has observed, written and taught during the ten years he has been at the head of the Val-de-Grâce. The excellent results of disarticulation of the knee, espe-



cially recorded in his Clinical Observations upon Gun-shot Wounds, were obtained in soldiers who had just been wounded on the field of battle. This difference in the results derivable from immediate and secondary amputation at the knee-joint, depends upon the fact that even in a state of health the size of the bones is not in complete accord with the amount of soft parts—a disproportion that becomes still greater when the patient has lost flesh during prolonged suffering and abundant suppuration.

In another communication, M. Baudens observes that, although the surgeons of the Sardinian army in the Crimea hesitated to employ chloroform, those of the French army have used it in twenty-five thousand cases without any accident resulting. It was always administered with great care, so as not to go beyond the production of insensibility.—[*Comptes Rendus. Med. Chir. Rev.*

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*Citrate of Caffein in Neuralgia.* By G. W. ARNETT, of Bossier Parish, Louisiana.

I see in the May number of your Journal—p. 414—Muriate of Morphia and Coffee recommended in Neuralgia by M. Boileau.

I have used in the same disease the Citrate of Caffein and the Sulphate of Morphia with more success than with all the remedies that I have seen tried. I have used the same remedy with more relief to my patients in nervous headache, hysteria, and a few other diseases of a similar character, than any other *one* remedy. My prescription varies in amount to suit the case; but the average would be about

grs.  $\frac{1}{2}$  sul. morphia, grs. iij caffein, grs. iij citric acid, to be given in some warm coffee, or which is better, in a decoction of rad. senega. The caffein and citric acid will, in the majority of cases, relieve nervous irritation without the addition of the morphia; which is a desideratum when the bowels are constipated. It acts powerfully on the skin; equalizes the circulation, and thereby removes local congestion.—[*Charleston Med. Journal.*

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*On the Treatment of Ranula.* By M. GOSSELIN.

M. Gosselin, after alluding to the various modes of treating ranula, that have been adopted, and the relapses that are so common after them, describes the plan he has himself found beneficial. He first of all performs excision, as recommended by Boyer, and then cauterizes with the nitrate of silver. Next day he introduces a probe into the wound, owing to its tendency to close, and repeats the cauterization the day after that. On the third or fourth day he enlarges, by means of the scissors, the aperture, which has become too narrow, and on the following day cauterizes again. After ten or twelve days of this assiduous attention, if on the introduction

of a probe he finds the cavity is obliterated, he leaves the opening to itself. If, however, a track of a certain extent still exists, he again enlarges the orifice with the scissors. This attention to the case is rarely required beyond fifteen days, when the external opening becomes closed, and the cavity being obliterated, there is no fear of relapse. M. Gosselin has operated in this way in several cases, and in three of these, which he has watched for several years, no relapse has ensued, the opening remaining closed. This plan of procedure has also been extended to various analogous cases, in which there is a cavity with secreting walls, having no spontaneous tendency to approach each other.—[*L'Union Méd. Brit. and For. Med. Chir. Rev.*]

## EDITORIAL AND MISCELLANEOUS.

### BIBLIOGRAPHICAL.

*A Treatise on Therapeutics and Pharmacology or Materia Medica.* By GEORGE B. WOOD, M. D., late President of the American Medical Association, &c., &c. Philadelphia: J. B. Lippincott & Co. 1856. 2 vols. 8vo. (For sale by T. Richards & Son.)

The work before us is from the pen of one who “for a period of about thirty years, before 1850, when he was transferred to the Professorship he now occupies, was engaged in teaching *Materia Medica*, first as a private lecturer, and afterwards, successively, in the Philadelphia College of Pharmacy, and the University of Pennsylvania;” one than whom no man in our country can be supposed better qualified in every respect for the production of a first-rate treatise on Therapeutics. These volumes, comprising upwards of 1700 pages, are divided into two parts, the 1st treating of General, and the 2d of Special Therapeutics and Pharmacology. In the first part we find chapters upon the operation, the effects, the application, and the classification of medicines. The second part comprehends the general remedies, as astringents, tonics, stimulants, sedatives, and alteratives; the local remedies, as emetics, cathartics, diuretics, diaphoretics, expectorants, cholagogues, emmenagogues, &c.; local remedies affecting the organization; local remedies acting mechanically; and lastly, the non-systemic remedies, as antacids and anthelmintics.

We have given the above synopsis of the contents of the work as better adapted to convey some idea of its scope than could be done in any other way with the space allotted us. We cheerfully commend this great American production to the profession, believing that no one will regret having bought it, after perusing it.

*On the Diseases of Infants and Children.* By FLEETWOOD CHURCHILL, M.D., &c., &c. 2d American edition, enlarged and revised by the author. Edited with additions by WM. V. KEATING, M. D., &c., &c. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 735. (For sale by T. Richards & Son.)

The author of this treatise is one of the most prolific and successful medical writers of Great Britain, and the American profession will doubtless appreciate the value of this enlarged edition. The first seventy pages are devoted to the management of infancy and childhood; after which the author passes to the consideration of special diseases under the heads of diseases of the Cerebro-spinal system, diseases of the Respiratory system, diseases of the Heart, diseases of the Digestive system, diseases of the Skin, febrile affections, &c. The book is fully posted up, and will be found a valuable addition to the practitioner's library.

*Medical Jurisprudence.* By ALFRED L. TAYLOR, M. D., F. R. S., &c., &c. 4th American, from the 5th and improved London edition. Edited with additions by EDWARD HARTSHORNE, M. D. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 700. (For sale by T. Richards & Son.)

We have here a work treating of poisoning, in general, and by particular agents; of wounds, infanticide, pregnancy, delivery, concealment of birth, criminal abortion, birth inheritance, legitimacy, paternity, hermaphroditism, impotency, sterility, rape, asphyxia, drowning, hanging, strangulation, suffocation, lightning, cold, starvation, and insanity.

Taylor's Medical Jurisprudence has long been a standard work of reference in England and in this country, and very deservedly so. The author is a clear, concise and judicious writer.

*Human Physiology, Statical and Dynamical, or the conditions and course of the life of man.* By JOHN WM. DRAPER, M. D., LL. D., Professor of Chemistry and Physiology in the University of New York. Illustrated with nearly 300 wood engravings. New York: Harper & brothers. 1856. 8vo., pp. 650. (For sale by T. Richards & Son.)

Prof. Draper has been long known to the profession as one of the most happy and successful teachers in our country. His finely cultivated mind and peculiar mode of treating physiological subjects, have given to his work a degree of freshness that will win for it the good will of the reader. Book 1st, on "Statical Physiology" comprises the study of the various functions of the body, whilst the 2d Book, or that on "Dynamical Physiology," is devoted to the examination of the principle of organization, the influence of physical agents on the organic series, the organic cell, reproduction, growth, sleep, and death. The author dwells, lastly, upon the influence of physical agents on the aspect and form of man, and on his intellectual qualities, and upon what he styles "social mechanics," or the history of society, comparative and human. We regret that our limits do not at



present permit us to do more than simply to advise those who wish to read an interesting and instructive work on physiology to provide themselves with a copy of the one before us.

*The Microscope and its revelations.* By WM. B. CARPENTER, M. D., F. R. S., &c., &c. With an appendix containing the applications of the microscope to clinical medicine, &c., by F. G. SMITH, M. D., &c., &c. Illustrated by 434 engravings on wood. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 725. (For sale by T. Richards & Son.)

No one can be better qualified for giving a correct and full report of the present state of microscopy than the learned and indefatigable author of the work before us. After studying the history, construction, and management of the microscope, he directs the student to the microscopic structures of the various forms of vegetable and animal life, and finally to the animal kingdom. The appendix, by Prof. Smith, occupies about 75 pages, and will be found highly useful. The work as a whole is an exceedingly interesting contribution to medical literature, and will add to the well earned reputation of the author.

*Human Physiology.* By ROBLEY DUNGLISON, M. D., LL. D., &c., &c.—With 532 illustrations. 8th edition; revised, modified and enlarged; in 2 vols., 8vo. Philadelphia: Blanchard & Lea. 1856. (For sale by T. Richards & Son.)

The call for an eighth edition of this work shows the high estimation in which it is held by the profession. Like Carpenter, of England, Professor Dunglison has done much and good service to the cause of science by his laborious and able compilations—diligently collecting and placing before the reader, in a happy style, the facts and opinions of others scattered over the broad expanse of medical literature. While neither the English nor the American author may lay much claim to originality of research, they are, we repeat, eminently entitled to the gratitude of the profession. The work before us is an excellent, well arranged, system of Physiology—an admirable text-book for students, and book of reference for practitioners.

*An Introduction to Physiology, designed for the use of Students and of the general reader.* By M. LA BORDE, M. D., Professor in the South Carolina College. New York: R. B. Collins. 1855. 8vo., pp. 400.

The author announces in his Preface that, “it is not his purpose to write a detailed and professional treatise on physiology, but to present the subject in such a manner as to engage the attention of the general reader.” We fully agree with him with regard to the importance of familiarizing men with their own structure and functions; and the little volume before us is well calculated to please as well as to instruct. It is not adapted to the student of medicine, but cannot fail to be useful in our literary institutions.

*New Remedies: with Formulæ for their preparation and administration.*

By ROBLEY DUNGLISON, M. D., LL. D., &c., &c. 7th edition, with numerous additions. Philadelphia: Blanchard & Lea. 1856, 8vo., pp. 775. (For sale by T. Richards & Son.)

This is another of Prof. Dunglison's excellent compilations of useful matter, which has reached a seventh edition. New articles are being continually brought to the notice of the profession through the periodical press which have not yet obtained a place in the systematic works on materia medica. This work, as its title implies, relates principally to agents of this class, and will save the practitioner the trouble of seeking in many places what he may here find collected for him.

*The Dissector's Manual of Practical and Surgical Anatomy.* By ERASMUS WILSON, F. R. S., &c., &c. 3d American, from the last revised London edition, illustrated with 154 wood engravings. Edited by WM. HUNT, M. D., &c. Philadelphia: Blanchard & Lea. 1856. 12mo., pp. 580. (For sale by T. Richards & Son.)

This is one of the most generally approved assistants for the dissecting rooms of our medical colleges. It is well adapted to the purpose for which it is designed.

*A Review of the present state of Uterine Pathology.* By JAS. H. BENNET, M. D., M. R. C. P., &c., &c. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 75.

The object of this little work is an analysis of the facts and doctrines of those who differ from the author upon the interesting subject to which he has bestowed so much of his attention. His arguments are very plausible, but we still think him too much under the influence of one idea to be blindly followed. The uterine mania, if we may so call it, has done much good; but a vast deal of mischief also.

*Clinical Lectures on the Diseases of Women and Children.* By G. S. BEDFORD, A. M., M. D., &c., &c. 4th edition, carefully revised and enlarged. New York: Samuel S. & Wm. Wood. 1856. 8vo., pp. 602. (For sale by T. Richards & Son.)

We have just received a new edition of the above work, making the fourth in the short space of fifteen months. It must be highly gratifying to the author to find his work so generally and favorably received. Having already repeatedly directed attention to it, we will now confine ourselves to this simple announcement.

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*Albinos.*—Having seen it stated in the newspapers sometime ago that a negress in Alabama had given birth to three children, two of whom were white and the other black, we addressed a note to Dr. John H. Hundley, of Mooresville, the attending physician, requesting a statement of the facts.

We have been favored with a reply from the Doctor, who informs us that it has been ascertained by microscopic examination of the hair of these children that the two white ones were albinos, their hair presenting the negro peculiarity as strongly as that of the black child. Our informant adds, that both parents are full-blooded negroes—that the mother has had fourteen children, five albinos and nine blacks, and that the albinos are as white as any of the caucasian race.

The conjectures about double paternity and superfetation are therefore, in this case at least, set at rest. The advantages of the microscopic test are also here clearly set forth.

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*Professorial Changes.*—Professorships appear to be at a discount, if we are to judge from the numerous resignations and changes that have taken place since the close of the last winter sessions. As all is not gold that glitters, so it is with medical colleges. Professorships are not necessarily profitable, nor is the sum of their remuneration always indicated by the “catalogue of students in attendance.” The competition for numbers seems to be greater, in some places, than that for money, and two “dead-heads” are there preferred to one paying student. It is not to be wondered at that men of sense will get tired of such empty honors as are to be met in many of the colleges of our country.

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Dr. H. W. DESAUSSURE FORD, of this city, has been appointed Demonstrator of Anatomy in the Medical Department of Pennsylvania College, Philadelphia. Our young friend will, we feel assured, sustain himself creditably in the position thus assigned him.

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*The New York Medical Times* has merged its identity in that of its cotemporary the *New York Journal of Medicine*. The editors of both will unite their exertions in behalf of the latter.

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*An Easy Mode of Constructing Bougies.*—Dr. P. H. Cabell, of Selma, Ala., calls (*Virginia Med. Journal*, April, 1856) attention to an easy and rapid mode of constructing bougies, which he thinks presents some advantages, both as to the qualities possessed, and the facility and cheapness with which they may be made. Reflecting upon the advantages the bougies made of elm bark possessed, from the ease with which they are introduced, and the expansion they undergo while in the urethra; and then thinking of the danger of breaking, the difficulty of treating deep-seated strictures, and the grave accidents which sometimes occur, Dr. C. determined to seek some substitute, which would possess its good qualities, and be free from all risk.

“The substance I finally selected was untanned cowhide, which may be obtained sometimes of great thickness. It is first to be well soaked in water, then cut into strips of suitable length and width, and tacked by the



extremities over a block of wood of the proper curve. When wished straight, no form is necessary, they being merely stretched on a plane surface till dry. When dry, they are found very tough, unyielding, and of sufficient elasticity. They may be brought to the proper size by the knife, rasp, sandpaper, &c., and will be found to have a fine polish, which allows them to be introduced with ease; they are much more rigid than either the wax or gum instruments, but they are sufficiently yielding to be perfectly safe unless great violence is used, and even then I do not conceive that there could be much if any risk of making a false passage.

"There are two ways of preparing them for use—one by oiling as usual, and the other by dipping for a few moments in warm water. The point may be previously well softened by a longer immersion in water. It thus becomes almost jelly-like, and glides easily and painlessly along the urethra. If the surgeon does not wish to avail himself of their expansiveness in dilating the stricture, he may cover them with a solution of gutta serena, in chloroform, which will protect them from the action of the urethral mucus, and render them beautifully polished."—[*Am. Jour. of Med. Sci.*]

*Ergot and Borax, their special indications.*—We take from the *Union Médicale* the following comparison of these two agents, in their effects upon the uterus, by Dr. Spengler, of Ems. Each promotes uterine contractions, but are indicated under different circumstances. Borax is preferable when the woman is laboring under an exaltation of sensation, or when there are spasmodic symptoms, cramps, and pain; or gastric symptoms, dyspepsia, acidity of the stomach, or a bilious condition. Ergot answers better with soft, leuco-phlegmatic women, whose fibres are relaxed. When the woman is greatly exhausted, physically and morally, when the pains are very severe and insupportable, the addition of ether to the ergot is the best means of procuring relief. Chloroform would probably answer equally well, since it is the anæsthetic effect which is desirable. M. Spengler prefers the infusion, made with two to four parts of ergot to one hundred of water. About two parts of ether may be added. The dose is a large spoonful every fifteen minutes. If there be gastric derangement, or constipation, castor oil is often sufficient to provoke uterine contractions.—[*Boston Medical and Surgical Journal*].

*The Medical Association.*—The American Medical Association, at its annual meeting in the year 1852, resolved to contribute a marble block to the Washington Monument. The following letter has been written by the Chairman of the Committee, announcing the gift and describing the block, which is said to be beautiful in design and execution:

*To the President of the*

*Washington National Monument Society:*

SIR—At the meeting of the "American Medical Association," in the city of Richmond, in May, 1852, the following preamble and resolution were unanimously adopted:

"Whereas it is the duty of patriotism to do homage to those who have been benefactors to their country; and whereas the medical profession in the United States, heretofore not wanting in patriotic feeling or action, desire to co-operate with the other public bodies and institutions of the coun-

try in rendering their profound reverence to the memory of him who was 'first in peace, first in war, and first in the hearts of his countrymen.' Be it, therefore,

"*Resolved*, That a committee of five be appointed, whose duty it shall be to solicit subscriptions from members of the American Medical Association for the purpose of procuring a suitable stone, with an appropriate inscription, for insertion, in the name of this association, into the national monument to the memory of Washington, now in progress of erection at Washington City.

In compliance with the above resolution, the committee contracted with Mr. Lewis Haldy, marble mason of the city of Lancaster, to execute the work. A block of Vermont statuary marble was procured, and there was at that time in the employment of Mr. Haldy a young artist, Mr. J. Augustus Beck, a native of Litiz, Lancaster county, Pennsylvania, who, after seeing the design, undertook to execute it. The design, recommended to the committee by the lamented Dr. A. L. Pearson, of Salem, Massachusetts, represents the interview between Hippocrates, the father of medicine, and the ambassadors of Artaxerxes, King of Persia, who brought him costly presents and money to induce him to leave his native country and enter the king's service; and as in the act of saying, "tell your master that I am rich enough; that honor will not permit me to accept his gifts nor to go into Asia to succor the enemies of Greece."

Animated by the same spirit of devotion to their country which influenced the greatest medical mind of Greece, the Physicians of the United States now tender to you this tribute of their love and veneration of him, who, whether possessed of civil or military power, had no other ambition than to serve well his country. In claiming this privilege they would point you to their country's history, which records among her purest patriots the names of such medical men as Warren, Rush, and a host of others who perilled their lives and fortunes in the cause of liberty. Whether in the field or in the council, they have ever manifested their devotion. And whenever perils from within or dangers from without threaten to weaken the strength, to mar the beauty, or to assail the integrity of our glorious Union, they offer this as a pledge through you to our common country that they will ever be ready to follow the example of their fathers in making a similar sacrifice.

In behalf of the committee of the American Medical Association.

JNO. L. ATLEE, Chairman.

Lancaster, (Penn.) Sept. 8, 1856.

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*Safety during Thunder Storms.*—The records we are now making of the freaks of lightning in various sections of the country, both far and near, prompt this communication.

First: Many persons suffer greatly from fear of lightning during the thunder storms. To such we say that thus far, since steamboats have been in use, no case of loss of life by lightning has occurred in a steamboat or ocean steamer in a period of fifty years or more; and since railroads have been in use, now about thirty or more years, no case of loss of life by lightning has been known in a railroad car. This wonderful exemption, when it is considered that tens of millions of passengers have been conveyed by these two facilities, is extraordinary, and should calm the feelings of the

timid during thunder storms, while in steamboats, ocean steamers or railroad cars.

Second: No case of loss of life by lightning has been known in an iron ship of iron building. This fact, with those stated in the next preceding paragraph, should effectually dispel the too prevalent belief that metals are dangerous, from an erroneously supposed attraction for lightning; metals attract lightning, but the attractive power probably does not extend over a great surface.

Third: Vessels provided with lightning conductors have never suffered injury from lightning, if the conductors were up and the continuity uninterrupted to the water; nor has death by lightning been ever known on board of a vessel thus furnished.

Fourth: We have never known of but one death from lightning in a building furnished with metallic conductors, reared for the purpose of protection, and that occurred in the summer of 1855, at Little Prairie, Wis. In relation to this death we have had considerable correspondence with the person who put up the conductor.

Iron wire, costing less than one cent per foot, and less than one dollar per hundred feet, in one single piece, is sufficiently large for a lightning conductor. Any mechanic of ordinary capacity can put up a rod. Glass insulators with screw fastenings can be had of some of the hardware and glassware stores in New York for about twelve shillings per dozen. Persons who want ornamented rods can substitute copper wire of the same size.

One register of thirteen years states the deaths by lightning at 750 persons; the wounded we have not counted—they number many hundred.

Persons struck down by lightning should be freely drenched with cold water, and if necessary the drenching should be continued for hours.

We have no pecuniary interest, direct or indirect, in the furnishing or putting up lightning conductors; our only object in making this notice is to give information.

We have printed a sheet giving directions for putting up conductors that will be sent to any person, postage free, who may desire a copy.

Brooklyn Heights, June 9th, 1866.

E. MERIAM.

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*Injection of Balsam Copaiba in Gonorrhœa.* By M. DALLAS.—M. Dallas, of Odessa, states, in confirmation of the observations already published by Taddei, Marchal, and others, that the injection of the balsam of copaiba is the most efficacious mode of treating gonorrhœa. In sixteen cases he has so employed it, using no internal remedy, either in recent or old gonorrhœa, with complete success. His formula is copaib. five drachms; one yolk of egg; gummy extract of opium, one grain; water seven ounces. The injection should be used several times a day.—*Brit. and For. Med. Chir. Review*, from *Gaz. des Hop.*

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*Tincture of Iodine as a Collyrium in Hypopyon.*—M. Rivaud-Laudran recommends (L'Union Médicale, April 6) the tincture of iodine, four or five drops to six drachms of water as a collyrium to produce absorption in hypopyon.—[*American Jour. of Med. Sci.*



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## ORIGINAL AND ECLECTIC.

### ARTICLE XXXII.

*An Essay—Historical, Theoretical, and Practical—on Hydro-Therapeutics.* By JNO. STAINBACK WILSON, M. D., of Muscogee county, Ga. (Continued from Oct. No., page 590.)

In accordance with the intimation previously given, we now proceed to the practical application of principles to the treatment of specific diseases; but before engaging in this part of our task, it may not be amiss to make a brief abstract of the general principles already advanced, with the design of making them the basis of our therapeutical superstructure.

The main points assumed by us as axiomatic, or susceptible of demonstration, were these—viz:

That animal life, in its ultimate analysis, is nothing more nor less than a continued *transformation* of matter, (Aph. I.); that these transformations comprise all the physiological functions—digestion, absorption, &c., &c., (Aph. II.); that the above changes are rendered more active by exercise, and by *cold*, through the agency of the *Vis Medicatrix Naturæ*, (Aph. III.); that the *direct* effect of water, of a lower temperature than the human body, is sedative, (Aph. IV.); that its *indirect* or re-active effect is that of a stimulant, (Aph. V.); that the first impression produced by the application of cold water to the surface, is a vivid shock to the nervous system, with a simultaneous repulsion of the fluids upon the inter-

nal organs; and that re-action, with determination to the capillary system of vessels, general and cutaneous, follows as a sequence, (Aph. VI.); that derangement or impairment of the NERVOUS POWER is the primary link in the chain of morbid action, (Aph. VII.); that the second link in this chain, is derangement of the CAPILLARY SYSTEM of vessels, (Aph. VIII.); that, as a general rule, decidedly cold water should not be used on the surface of the body, in active internal inflammations, high fevers, and acute diseases, unless it be *continuously* applied, (Aph. IX.); that the degree of re-action, after the cold bath, is, in general, *cæteris paribus*, proportioned to the coldness of the water—to the suddenness and force of the immersion, &c., &c., (Aph. X.); that the cold bath is not *positively* contra-indicated in acute internal inflammations, &c.; but on the contrary it is correct in principle; the only objection being the practical difficulty of keeping up uninterrupted sedation, so as to avoid injurious re-action, (Aph. XI.); that most of our medical writers, being misled by erroneous theoretical fears, or confounding the effects of water of different temperatures, are over-cautious and restrictive in its use, (vide Corll.); that confusion and misconception might be avoided by dividing all baths into two classes—*plus* and *minus*—including under the one head, all stimulant baths, and under the other, all sedative baths; that infancy and old age do not, in themselves, constitute an objection to the use of the cold bath; that menstruation and pregnancy are not necessarily contra-indications to its use; but, on the contrary, that minus baths of the higher temperatures, are positively indicated in the latter condition; that the popular fear of cold, after parturition, is unfounded, as is proved by the impunity with which hydropaths practice their excesses;—that the warm bath is a *minus* or sedative bath exclusively; and that it is a great error to confound the effects of this with those of the hot bath, as has been done: and therefore, that the warm bath is *not* contra-indicated in inflammatory affections of the head and chest—in general plethora—in fevers—or in any state of general excitement accompanied by an “active circulation and a hot dry skin.”

Such is a brief summary of the general principles, which, we think, should govern us in external hydro-therapeutics: it is true, they have not been elaborated with a formidable array of argumentation; still, if we are not mistaken, they are either self-evident, or capable of demonstration, and we stand prepared to

defend them if attacked, or to retract any one of them, if refuted; truth and the advancement of science being our only objects. We therefore sincerely invite discussion, should any of our positions be considered erroneous. It may be proper to remark, just here, that we have confined ourself to the external applications of water, because this department, in our opinion, most abounded with error; but in treating of the practical part of our subject, (which we now proceed to do,) we will allude to the internal use of this remedy wherever it seems to be necessary.

*Special Hydro-Therapeutics.*

What we have to say on this subject, will be ranged under the the following heads:—1st. Some of the more important diseases of the three great cavities—the Head, the Chest, and the Abdomen. 2d. General and Unclassified Diseases. And 3d. Some of the more important Diseases of Women and Children.

As affections of the eye belong most appropriately to the first sub-division, we will make a few remarks on Ophthalmia, before we notice the diseases which belong strictly to the encephalon. Most writers recommend the local application of water, cold and warm, in this disease; and cold water is doubtless one of our most valuable remedies; still we are satisfied that it often proves nugatory, and even injurious, for want of proper attention to its *modus operandi*. It should never be forgotten, that cold water, while it is a direct sedative, nevertheless excites a certain degree of irritation, when it is applied immediately to a highly inflamed and sensitive organ. And we have this frequently exemplified in the treatment of acute ophthalmia: still we think the great difficulty, after all, is, that the water is not changed sufficiently often; that the sedative impression is not *continuous*; and therefore that the inflamed organ is subjected to the injurious stimulating and reactive effects of the remedy, instead of the desired sedative effects. In illustration of this position we will allude to a case, without stopping to give any details.

A physician, finding all salves and medicinal applications of no avail, in a case of acute ophthalmia, ordered the patient to immerse his face and eyes daily, in cold water, for a half hour or more. As might have been expected, this treatment gave rise to a succession of stimulating reactions which only aggravated the pain and inflammation. The result was that a quack, or an ultra



hydropath (there is not much difference between the two, we think) was called upon; he taking a common sense view of the case, discontinued the cold water, prescribed a tepid bath (sedative) twice daily, with a warming or non-evaporating cold water compress, to be worn over the eye, day and night, and thus cured the patient; adding another to the list of triumphs obtained by empiricism, through neglect of the plain principles of science.

The rule for the local application of cold water in acute ophthalmia is manifestly this—to use it tepid at first, where the sensibility is great, reducing the temperature gradually as the eye becomes accustomed to it, and keeping up the sedative impression *continuously*, by frequently changing the water. We are aware that there is some difficulty in this, still it is not insurmountable; and we are satisfied that the superiority and success of this practice will be sufficiently great to induce us to persevere in it, in spite of any difficulty in having it faithfully followed by the patient.

But in purulent, catarrhal, and other forms of chronic and sub-acute ophthalmia, a different practice is indicated: in these cases we desire the detergent, tonic and stimulating effects of cold water; it should therefore be used either cold, or *very* cold, according to the degree of excitability; and it should also be applied suddenly, intermittently and forcibly, as by the douche; or by injecting a very fine stream into the eye. We are strongly of the opinion that such a course as this, judiciously pursued, would be more safe, if not far more effectual and “elegant” than the multiplied hash of salves, ointments, washes and powders, so much used. And we make this remark advisedly, for we place a very high estimate on the nitrate of silver in such cases.

With a word on the constitutional hydro-therapia of ophthalmia, we conclude this division of our subject.

It is well known that many ophthalmic disorders are only manifestations of a general cachexia, such as rheumatism, scrofula, syphilis, &c.; this being true then, of course the constitutional treatment becomes a matter of primary importance: we would therefore, in addition to the means ordinarily employed in such cases, suggest the free use of water internally as a diluent, diaphoretic, solvent, diuretic, and eliminator of morbid matters; together with partial and general baths, warm, cold, or hot, according to the circumstances of the case, as tonics and derivatives. And even in simple ophthalmia, the wet-sheet packs and prolonged de-

rivative sitz-baths of the hydropaths, might be well worthy of our attention as auxiliaries to the means above indicated.

A case to illustrate the importance of general water treatment: A patient affected with chronic strumous ophthalmia, with corneal opacity, faithfully tried the usual remedies, without success. Partial and general cold bathing, with active exercise, free water drinking, and the eye douche were then prescribed, which removed both the inflammation and the opacity, *and restored the general health*.

What we have to say on affections of the head, will be embraced under two divisions—congestion of the brain; and encephalitis; including under the latter every variety of inter-cranial inflammation. Cold affusions and cold lotions are prescribed by almost all of our writers, in congestion of the brain: still, as there are three distinct pathological conditions in this affection, and as the action of water is equally variant, according to its mode of application, we think that the directions for its use are not sufficiently definite and discriminating. We will therefore be excused for enlarging somewhat on the nature and treatment of this common and important disorder; and more especially, as the principles of treatment applicable to it, may be applied, *mutatis mutandis*, to similar affections of other organs.

Congestion is generally divided into three classes: active, passive, and mechanical; but we will confine ourself entirely to the first two.

In active congestion, it seems that there is an increased afflux of blood to the affected part, with a rapid circulation, and distension of all the vessels, venous, arterial, and capillary. While in passive congestion the blood flows languidly through the hyperæmic vessels, without any necessary increase of arterial excitement, and its seat seems to be chiefly in the veins, and in the capillary vessels intermediate between these and the arteries.\* Now, if these definitions be correct, and they certainly are, as to the *essential* differences between active and passive congestion, then it follows as a necessary consequence that there must be a corresponding difference in the treatment.

We have already sufficiently indicated the two grand, distinct, and opposite modes in which water acts—viz: as a direct sedative, and as an indirect stimulant. It follows, then, from what has been

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\* Vide Watson's Practice, p. 47.

said, that the mode of using it in different cases of congestion, is a matter of vital importance. We have not space to dwell on the diagnostic symptoms of the two forms of congestion under consideration; we can only indicate the treatment which we consider consonant with the principles advocated. Let us take first a case of active congestion of the brain, with its characteristic pathology—an increased afflux to that organ, with distension of all its vessels, by a rapid and overwhelming current of blood. The indications, in such a case as this, are, evidently, to allay the excitement, to diminish the afflux, and to promote the contraction of the over-charged and distended vessels. To accomplish these desirable ends, the *direct, continuous, sedative* action of cold water is highly demanded; and we may add that its efficacy, when properly applied, is generally equal to the emergency. But it is obvious that it will disappoint us, if it be poured on the head, a short time, every two, three, or four hours; or if a *thick* cloth be wet with water and applied at corresponding intervals, as is too often done; for the affusions will produce only a transient sedation, to be followed by consequent re-action, and an aggravation of the mischief: while the thick cloths will be followed by like results, with the additional disadvantage of acting as a warm fomentation, by the prevention of evaporation. To obviate such serious difficulties as these, the *modus operandi* of the remedy should be kept clearly in mind: the affusions should be *frequently* repeated; or what would be better, cold should be *constantly* applied to the scalp by means of an ice cap; or by water falling on the head, *guttatim* from a funnel; or by means of light evaporating cloths renewed every *few minutes*. In addition to this local treatment, we would venture to suggest the wet-sheet pack, as most potent means of subduing vascular excitement—of equalizing the circulation, and of producing a strong derivative determination to the general cutaneous surface. But we must pass on to passive congestion.

This form consists, as we have seen, principally in a languid circulation through the veins and the capillary vessels. What then are the indications of treatment in a case of passive congestion of the brain?—Manifestly, to quicken the flow of blood through the stagnant vessels, to restore the tone and contractility of those vessels, and to divert the circulation into other channels. All this can be accomplished by availing ourselves



of the re-active, stimulating, tonic and derivative action of water. (Aph. V.) But instead of using it continuously, as in the other case, it should be as cold as possible, and should be applied *suddenly, forcibly and intermittently*, while the vigor of the circulation should be increased before, and after each affusion, by active friction; and, in short, by all the means already indicated as proper to secure full re-action. (Aph. X.) With a case, by way of illustration, we conclude this part of our subject.

A negro girl had congestion of the brain, in the cold stage of an intermittent: the physician poured cold water freely on the head, used cold cloths, &c., without success. After he had failed, her owner, seeing that cold water had not succeeded, and concluding from the practice of the Dr. that water in some form *must* be the remedy, determined that he would try what virtue there might be in *warm* affusions to the head. He did so. And lo! re-action ensued soon, consciousness returned, and she was entirely restored in due time. This was, in all probability, a case of passive congestion, or nervous coma, which was only aggravated by the continuous sedative action of cold water, while the warm affusion excited the vessels of the scalp, and relieved the brain of its pressure, or aroused it from its stupor; and thus saved the patient.

Having thus merely glanced at the more important points in the general pathology of congestion, and having indicated the correspondent treatment in congestions of the brain, we next pass by a natural transition to another affection of the same organ—inflammation; which may, in the majority of cases, be considered only the second stage of active congestion. It has been seen that we have, in active congestion, increased afflux of blood, a quickened circulation, and distension of all the vessels of the suffering organ: this, as before intimated, is the initiative of inflammation; for if this state of things be allowed to continue unchecked, we have the following additional phenomena:—Loss of contractility and paralysis of the vessels, from over-distension; remora and stagnation of the circulating fluid; change in its composition; disease and rupture of the containing vessels; extravasation of blood; effusion of lymph or serum; and structural or organic change, constituting the main features in the *pathology* and *termination* of inflammation. It would appear, then, from the preceding pathological and therapeutical principles, that the local sedative application of cold is more especially indicated in active local con-

gestion, or the first stage of inflammation. But, as there is no strongly marked line of demarkation between active congestion and positive inflammation—as we have no infallible diagnostic symptoms by which they can be distinguished during life, notwithstanding the essential difference in their pathology; and, above all, as inflammation, of the brain and other vital organs, is accompanied by constitutional sthenic disturbance, it follows that water, cold or tepid, is still indicated as a general or constitutional remedy, to allay excitement; to subdue the morbid action of the heart; to diminish the *vis a tergo*, and thus to afford opportunity for the distended and paralyzed vessels to recover their tone and contractility. The conclusion to which we come, then, is this: That, in the first stage of inflammation, or active congestion, without marked constitutional disturbance, the local sedative action of cold water is of primary importance; while its general sedative effects are more especially demanded in acute inflammation of the brain attended with constitutional excitement. But in inflammation of the brain or its membranes, as in active congestion, the water should be so managed as to avoid injurious re-action; and as this can be done only by keeping the patient almost constantly subjected to its sedative action, which would be difficult, and even unsafe where very cold water is applied to the whole surface, for a length of time, it should be used either warm or tepid. In such cases as these, the general warm bath, as a means of sedation without re-action; or the tepid sponge bath, with the local treatment indicated in speaking of active congestion, would seem to be the proper practice. But the warm bath, although correct in theory, is nevertheless obnoxious to many grave objections; among which we will only mention the difficulty of obtaining suitable vessels for bathing adults—the trouble and delay in making the necessary preparations—the difficulty and inconvenience, if not the impossibility of getting a delirious patient into the bath, and the unavoidable excitement to which he would be subjected. As to the sponging, while it is not liable to the same objections, we think it less effectual and convenient than the application which we venture again to recommend—the wet-sheet envelopment: an appliance which embraces all, and more than all the advantages of the warm bath, or the sponging, without any of the disadvantages. For while this application combines, to some extent, the stimulant with the sedative action of water, we are fully satisfied, both from

theory and experience, that its stimulating effects are so very slight and transient that they are scarcely worthy of notice in estimating the action of the remedy. It is true, that the first impression produced is that of a vivid shock, followed by intro-pulsion of the fluids; and that these phenomena give rise to consequent ré-action; but this re-active excitement is of very short duration, for the equilibrium of the circulation is soon re-established by the equalization of temperature of the envelopment to that of the body; and then the abstraction of caloric necessary to vaporize the water not only effectually cools the surface, but also subdues the general nervous and vascular excitement, which is manifested by a softer and slower pulse; by a moist skin; by subsidence of restlessness and delirium, and by quiet sleep. Such are the happy effects to be anticipated from this remedy: effects resulting from the maceration of the skin—from the expansion of the whole superficial capillary system, and the consequent diversion of an immense mass of the circulating fluid, from the vital and over-charged internal organs. And while it promises these delightful results, it can be applied in a moment, without subjecting the patient to a removal from bed, and when he is too weak to be placed in a bath; and above all, there is no difficulty about regulating the temperature as in the warm bath, for the cooling is only proportioned to the vaporizing power of the body: in other words, if caloric is generated rapidly, it is rapidly liberated by vaporization, and vice versa. Shall we be condemned then for recommending this remedy, regardless of a hydrophobic popular mania engendered by “old wives fables,” and false professional theories? Shall we be deterred from using a remedy so potent because it is claimed as the exclusive property of a set of hydro-maniacs who use it empirically? Should we fear the jeers and taunts of the ignorant rabble who cherish the idea that regular physicians are *sworn* to use the remedies prescribed by old Hippocrates, and none others?—that calomel, opium, the lancet and the *warm* bath, are the *summum bonum* and the *ne plus ultra* with the “faculty”? Nay! let us rise superior to all such influences as these; let us unhesitatingly avail ourselves of a good remedy wherever we find it, whether it come to us legitimately or illegitimately—whether it be the offspring of an old woman, or of a German peasant. By pursuing this course, and by tempering the weapons we may thus obtain, in the crucible of science, we will not only be more likely to succeed



in practice, but we will have the additional satisfaction of knowing that we could not possibly devise a better plan to mortify and defeat our irregular opponents: for it is a principal part of their tactics to foster the notion assiduously that we are confined to a certain set of remedies, and that they are in possession of a number of agents of *wonderful potency*, from which we are debarred either by prejudice, or by the dogmas of our schools; it is therefore much more mortifying to them for us to adopt the remedies *claimed* by them, than it is for us to oppose them; for by appropriating them, we effectually silence the *ad captandum* appeals of their noisy and dishonest advocates. But admitting that some, though convinced of the correctness of the practice, may be unwilling to hazard their professional reputation, by using *cold* water contrary to the established rules, it will be gratifying to such to know that all the most desirable ends may be obtained, in the cases under consideration, by using the water warm or tepid. And in cases where the more heroic "hydropathic" appliances are plainly indicated, it would be highly culpable to debar a patient from them, through fear of popular clamor. Under such circumstances as these, we think that it would be justifiable to have the water a little *aired*; or, in other words, to *pretend* to warm it a little; for, while we are willing to admit that "honesty is the best policy," as a pecuniary maxim, we have such an amount of ignorance and prejudice to contend with in medicine that we cannot aspire to anything higher, in our dealings with *patients*, than to be as honest as circumstances will permit. Such is our hydropathic code of ethics; and we confess that we have acted accordingly, in some cases, with much benefit, as we thought, to the patient. For instance, in treating a grave case of typhoid pneumonia, we determined to avail ourselves of the wet bandage to the chest; but knowing if any untoward event occurred, that it would in all probability be charged to the bandage, and wishing to avoid re-action, we had the water a little warmed; and then we reduced the temperature still lower, by holding the cloth in the air some time before applying it.

Although the remedial uses of water is the subject of this essay, we may be permitted, in concluding what we have to say on affections of the head, to make a few remarks on venesection. There is no class of diseases in which this remedy is more universally prescribed; and while we willingly admit that the benefit is often prompt and manifest, where it is demanded, we must say that it

is too often resorted to under the idea that coma, headache, delirium, and some other forms of cerebral disorder are necessarily connected with inflammation or pressure. And we are, moreover, inclined to the opinion, that patients are sometimes bled to subdue the very re-active excitement caused by previous bleedings; and that bleeding is not unfrequently resorted to, improperly, in the shock of a stroke of apoplexy, and in some forms of vertigo and paralysis. For even admitting that there is an undue determination to the brain in all these cases, (which we are far from doing,) it does not follow by any means that there is a *general* plethora or *excess* of blood demanding depletion; but, on the contrary, it is much more reasonable to suppose that these symptoms, in the majority of instances, spring from a loss of balance in the circulation, from an *irregular distribution* of blood, rather than a general excess. And we are satisfied that those symptoms sometimes originate in the want of a proper quantum of blood in the brain, and failure of the *vis nervosa*; and farther, that, while such cases are not unfrequent, and cases of irregular distribution are very common, instances of general plethora and hyperæmia are comparatively rare. This being admitted, then, it becomes us to consider whether we can devise any means which will spare an unnecessary, if not injurious effusion of the vital fluid. With this view, we recommend, in addition to the hydro-therapeutic measures above indicated, the plan proposed by Dr. Buckler, of Baltimore, and advised, in another affection, by Prof. Ford. By ligating the limbs, as directed by them, and by thus retaining a large mass of venous blood in the extremities, we would give the surcharged vessels an opportunity of contracting on their diminished contents, while their power of contraction would be increased by the local and general use of water, as above prescribed. By pursuing this plan, we would not only avoid the inevitable debilitating effects of depletion, in cases where it is actually indicated, but also the *irremediable* evils resulting from the improper abstraction of blood in cases of nervous coma, paralysis, &c., before alluded to. Besides these important advantages, this practice has the additional recommendation that it still leaves the way open for the lancet, in case it should still be needed. And we would anticipate any objection to this delay in resorting to venesection, by taking the position that we are fully justified in doing so, while we are using remedies so potent as hæmostasis, combined with the refrigerating,

sedative, derivative and equalizing action of water—an agent, but little, if at all, inferior to the lancet.

As our subject is too comprehensive for us to dwell on details, and as it is more desirable to establish general principles of treatment which may be applied according to the judgment of the practitioner, we will, in treating of diseases of the chest and abdomen, occupy ourself mostly in advocating the position that the same general principles of treatment are alike applicable in similar or identical pathological conditions, whether these are found in the head, chest, or abdomen.

We have already shown that the use of minus baths, duly tempered, in accordance with the intimate sympathy existing between the skin and mucous membranes, is correct in principle, in *chronic* inflammations of the gastro-intestinal and pulmonary mucous membranes. It will be remembered, also, that *decided* cold to the surface, unless continuously applied, has been proscribed, as a general rule, in *acute* internal inflammations, &c., of every kind, on account of *practical* difficulties. (Aph. IX. and XI.) We now contend that acute inflammations of the chest, pneumonia, pleuritis, &c., are no exceptions to the application of the above principles; and consequently that sedation by external cooling appliances is admissible in these affections. Let us take a case of pneumonia, or pleuro-pneumonia, as the representative of parenchymatous inflammations of the thoracic viscera. And first, in order to anticipate theoretical difficulties, we will endeavor to show that there is no *direct* sympathy between the skin, the substance of the lungs and the pleura, such as we find existing between the skin and the mucous membranes.

Dr. C. J. B. Williams, in speaking of cold as a cause of pneumonia, says: "It is certain that cold winds or cooling influences, *long applied*, are more sure to produce the disease than mere changes of temperature. (Cyclo. Prac. Med.—Art. Pneumonia.)

Dr. Jno. Bell says that the immediate and exciting cause of pneumonia is *represented* to be sudden transitions, &c. And then he adds: "Facts justify this explanation in many cases; but in many more, perhaps in the majority, it does not apply. (Bell & Stokes' Prac., p. 194.)

These authorities are considered sufficient to establish our position that there is no *direct* sympathy concerned in the production of pneumonia and pleurisy; and consequently that cold acts as a



cause, in these diseases, (where they are not intercurrent or consecutive,) as it does in other diseases—that is by intro-pulsion of the fluids, resulting in congestion and inflammation. This being true, then, it follows that the theoretical fears predicated on the relationship existing between the skin and mucous membrane of the respiratory apparatus are wholly unfounded. But we would not be understood as advocating the external use of *very* cold water in these affections, for it has been seen that we consider this an objectionable practice even in acute inflammations of *other* internal organs; what we wish to establish is simply this: that pleurisy and pneumonia are no exceptions to the general principles which should govern us in the treatment of other acute internal inflammations, and therefore that sedation by external cooling means is proper in these affections—just as proper as it is in inflammation of the brain and its membranes. In accordance with these principles, then, we think that we might, with safety and advantage, in many cases of pleurisy and pneumonia, resort to sponging, moderately cold or tepid evaporating and non-evaporating water bandages to the chest, and wet sheet packs, just as though the respiratory organs were not involved. And we may add, that we have tried this practice partially and cautiously, and have not had the least cause to regret it. Anterior to the “blistering point,” the wet bandage has several advantages: it is cleanly; it is convenient; it is agreeable to the patient; and it relieves internal inflammation and congestion by causing a determination to the cutaneous capillaries, and by gradual sedation without injurious re-action, if evaporation be permitted. As to the merits of the wet-sheet pack, (which is only an extension of the wet bandage over the whole body,) we have already spoken sufficiently when treating of another disease. We know that there are almost insuperable objections, originating in the prejudices of education, and in theoretical notions, in the minds of many, to the course we are advocating. But why should sedation by means of water be contra-indicated in pleurisy or pneumonia any more than in cerebritis or meningitis? We think that it would be difficult for the most strenuous objectors to give a rational answer to this question. For we have shown that there is no direct sympathy existing between the skin, the pleura and the pulmonary parenchyma. If so, *why*, we ask again, should not inflammation and congestion of the lungs and pleura be treated on the same general principles universally sanc-

tioned in corresponding states of the brain? Surely it will not be contended that the lungs and pleura are more vital and delicate organs than the brain and its investments. But even admitting that we have failed to establish our point, admitting that the sympathy does exist, which we have denied, we still contend that this sympathy would be no valid objection to the cautious and proper use of cold as an external sedative. On the contrary, as we said when speaking of *chronic* inflammations of the gastro-intestinal mucous membrane, this direct sympathy would only make the indication stronger to approach the disease through the skin, while it would much increase our power of thus acting upon it. The conclusions to which we are inevitably led are these then:—That there is no *direct* sympathy between the skin and the pleura, and the substance of the lungs (the seat of pneumonia): That such sympathy, even admitting its existence, would only render it more imperative to avail ourselves of the sedative action of water: That our powers would thereby be increased; and *therefore*, that the remedy should be regulated and *tempered* accordingly, so as to accomplish the end desired, and *no more*.

It will readily be inferred, from what has been said, that we would even favor the refrigerating use of water in some cases of croup, sore throat, bronchitis, &c. But let it be distinctly understood, that we would, in all such cases, keep the sympathetic relationship between the skin and mucous membranes clearly in view, and that we would *modify our applications accordingly*. And lest our arguments should have failed to carry conviction, and lest we should be considered as having strayed entirely beyond the pale of orthodoxy, in advocating the doctrines we have, we will fortify ourself behind the opinions of a few distinguished regular authorities.

Dr. Whiting says: "This practice (the use of cold in inflammations of the chest and abdomen) has, however, of late, been recommended by some physicians whose opinions ought to have weight, and especially as the recommendation seems to be grounded on the result of experience." And then he goes on to say that he has used cold evaporating lotions to the chest in some cases of phthisis pulmonalis, accompanied with inflammation of the chest, with considerable advantage. (Cyclo. Prac. Med.—Art. Cold.)

Dr. Tweedie informs us that the local application of cold, in the sub-acute and chronic inflammation attending the formation or

progress of tubercles, tends materially to check the disease. He also advises frequent cold sponging of the chest as the best protection against cold in such cases. (Op. cit. Art. Inflamm.) And here we would remark, that we are fully satisfied that this sponging of the chest, followed by friction, is far preferable to flannel as a prophylactic, not only in phthisis, but in almost all other cases where we wish to guard against atmospheric vicissitudes. In this opinion we are sustained by Dr. Watson, who recommends the shower bath highly as a preventative to catarrh, bronchitis, &c. (Prac. p. 534.) With two cases by way of illustration, we conclude this part of our subject.

CASE I.—The writer contracted a pulmonary disease in August, 1849, from taking a glass of ice-cream; the cough and uneasiness in the chest continued so long as to excite fears that a latent predisposition to phthisis might have been developed by the exciting cause mentioned; he, therefore, had Professors Ford and Dugas to make a physical examination, but they gave no countenance to such fears. Still, the cough continued very troublesome until March, 1850, when he was, on a very cold day, accidentally thrown into a river; this relieved the symptoms very much; but yet they returned in a few weeks, and have never been absent any length of time since, except for the last four months; *and present exemption is plainly attributable to the use of shower baths and frictions*; for as the subject of this report had much rather administer medicine than to take it himself, none has been taken this year.

CASE II.—G. P. B. had a chronic bronchitis of three or four years standing; he had tried a number of physicians, and many remedies, without avail. When he came under our treatment we used tartar emetic externally and internally, and various other remedies with only partial and temporary success. He then removed, carrying his old disease with him, but much to our surprise we heard from him not long after this, and he had relieved himself entirely by using a *wet bandage* to the chest, in accordance with our suggestions.

We next proceed to make a few general remarks on the treatment of some of the more important diseases of the abdomen, viz: Peritonitis, dyspepsia, diarrhoea and dysentery. If we have been successful in demolishing the stronghold of professional and popular prejudice—if we have not failed in demonstrating the safety



and efficiency of water as a sedative and refrigerant in affections of the *chest*, it is needless for us to multiply arguments to show that the same principles of treatment are applicable in diseases of the abdomen. Taking this for granted, then, we will now endeavor to show that water, in some of its modes of action, is not only admissible in abdominal affections, but that it is *superior* in some cases to the remedies considered strictly medicinal. This would seem to be the case in peritonitis, on account of the close proximity of the abdominal serous membrane to the skin. We cannot speak from experience on this point, but we are fully satisfied from our knowledge of the action of water, that the use of wet bandages to the abdomen, evaporating or non-evaporating, according to the degree of local and general excitement, together with the wet-sheet fomentation, sponging, etc., would be attended with the best effects. And we are pleased to find that we are sustained in this opinion by Dr. Sutton. (*Cyclo. Præ. Med.* p. 797.) But it is in affections of the gastro-intestinal mucous membrane that we are to expect the most brilliant triumphs of hydro-therapeutics. Dyspepsia, in its protean forms, is justly regarded as the terror of physicians; the reproach of medicine, and the most fiendish of all diseases, preying alike upon the mental, moral, and physical constitution of its hapless victims. This is one of the spirits which will not be exorcised, in many cases, by drug incantations; how fortunate then that water treatment, externally and internally, promises more in these deplorable cases than in any other class of diseases, perhaps! In treating of the remedial application of water in this disease, we cannot think of noticing all the minute divisions and subdivisions made by systematic writers, like Dr. Todd, who gives us some eighteen or twenty different genera and species, and reserves a niche *for more*. It will be sufficient for our purpose to make only two divisions of the disease: 1st. Inflammatory Dyspepsia, including all cases of morbid vascular excitement, and active hyperæmia of the digestive mucous membrane; and 2d. Atonic Dyspepsia, including such cases as are attended with local debility, deficient secretions, impaired innervation, and passive congestion.

We are fully persuaded that a large majority of cases of dyspepsia belong to the first division; that the pain, burning, excessive and depraved secretions, and all the multiform symptoms which characterize this disorder are generally indications of

subacute or chronic inflammation, or active congestion of the digestive mucous membrane. And we are equally satisfied that two grave errors are often committed in the management of this disease. The first of these is a false diagnosis which attributes the dyspeptic symptoms to local debility or want of tone. And the second difficulty is that *no* diagnosis whatever is made, the symptoms being treated empirically without any regard to the pathological condition from which they originate. Is it a matter of surprise, then, that the treatment of indigestion is so often unsuccessful? And especially when we call to mind the fact that almost all internal medicines, even those belonging to the antiphlogistic class, act as direct irritants to the gastro-intestinal mucous membrane? This is strikingly exemplified in acute gastritis, for it is well known that our hands are tied in this disease, and that our internal *medical* treatment amounts to almost nothing. In subacute and chronic gastritis we have a similar pathological condition, with the same increase of sensibility, differing only in degree; and, therefore, identical results must ensue from the action of medicines. We readily admit that the local stimulus of drugs is sometimes beneficial in such cases, but we fear they are oftener injurious on account of the difficulty, not to say impossibility of proportioning the degree of excitation to the excitability of the affected parts. While we would not wholly proscribe internal remedies, then, in inflammatory indigestion, we consider external remedies addressed to the skin and assisted by proper hygienic and dietetic regulations far more safe and effectual. Indeed it is hardly necessary to reiterate the opinion expressed by all authors, and confirmed by all observers, that the regimen is a matter of *primary* importance in any plan of treating dyspepsia. What then are the best remedies for this disease? They are local and general baths—cold, tepid, or warm—according to the circumstances of the case. What are the circumstances which should principally engage our attention? They are, first, to diagnosticate the true pathological condition of the case, and then to *temper* our water accordingly. If the symptoms originate in subacute inflammation or active congestion of the mucous membrane, or in chronic inflammation accompanied with accidental or *extraordinary* excitement, then is the warm bath peculiarly indicated, to allay the local and general nervous and vascular excitement; to equalize the circulation; to derive to the surface, and to restore the functions of

the skin so often disordered, and so intimately associated with the digestive membrane. And we are happy in finding that Dr. Forbes gives his *unqualified* assent to this practice; for he says: "In no class of cases is the warm bath more strikingly beneficial, than in those affections of the stomach and bowels which are commonly ranged under the head of *dyspepsia*." And he quotes with approbation a remark of M. Rapou, corresponding with the views expressed by us, viz: "That chronic inflammations of the mucous membrane of the stomach and bowels, are frequently confounded with nervous dyspepsia, gastralgia," etc. And consequently, that tonics and antispasmodics are used, to the injury of the patient, instead of the vapor and warm bath. (Op. cit.—Art. Bathing.) But while the warm bath is such an excellent remedy, it is almost impossible in many places to get a suitable vessel for bathing grown persons: how fortunate then, that we have a remedy, (the wet sheet,) which can be procured at all times and in all places; a remedy which enjoys all the advantages over the warm bath, already noticed under the head of inflammation of the brain, together with another not before noticed; it is a species of vapor bath, and it is well known that this bath, *cæteris paribus*, is *more derivative* than the warm water bath, on account of the greater rarity of a vapory medium. And we might just here whisper in the ear of some of our timid brethren, that they might thus get all the benefit of the vapor bath, without being considered a "vegetable steam doctor." In addition to the general wet-sheet fomentation, the same remedy may be used with the best effects, locally, in the form of the wet bandage to the abdomen. We can speak from actual experience of this latter remedy in dyspeptic affections, and we think that it is worthy of all praise. And what is remarkable, the use of pure simple water in this way, excites a severe cutaneous eruption; thus, making water, as strange as it may appear, a powerful *counter-irritant*. This is no doubt a part of the "*Crisis*" about which the hydropaths make such a parade, and which they attribute to the extraction of our poisonous drugs. We may say more of this hereafter.

We next notice *Atonic Dyspepsia*. In dyspepsia caused by debility and want of tone in the digestive organs, and even in some cases of chronic inflammation, the treatment already indicated would be appropriate to restore the skin to its normal functions. But here we need stimulation rather than sedation; we need some-



thing to re-invigorate the whole system ; something to excite the activity of all the organic processes, and the nutritive functions in particular. These ends may be partially accomplished by the internal use of stimulants, but much more safely and effectually by the external use of tepid and cold water ; by air ; by exercise ; and by rigid attention to diet. As there are but few cases of *pure* debility unconnected with chronic inflammation or passive congestion of the mucous membrane, the water should, as a general rule, be used as in other similar states, that is, with a view to its re-active stimulating effects. It should, therefore, be used in the form of cold affusions and cold sponging to the abdomen, and to the whole surface, according to the circumstances of the case ; and these remedies should be preceded by exercise, and followed by exercise and friction. (Aph. X.) The cold hip bath with *hard* friction of the abdomen and loins is also a valuable addition to our revulsive measures in many of these cases. The wet bandage will also be appropriate still, provided the symptoms do not originate in pure debility, which, as before intimated, is rarely the case. With a few general remarks on the treatment of some symptoms common to almost all forms of indigestion, we dismiss this affection.

*Constipation*.—This is a common and troublesome symptom of indigestion of all kinds, and is best relieved by cold and tepid injections ; for we fully concur in the directions given by some of our best writers, viz : That purgatives and even laxatives should be eschewed as much as possible. Indeed, we fear that this is a point not sufficiently insisted upon even now ; for we are satisfied that the too frequent use of cathartics, both by physicians and people, is an evil of enormous magnitude. We have the incontrovertible evidence of experience, that the large majority of cases of constipation of all kinds, may be relieved by the persevering use of cold water enemata. How inexcusable then the practice of keeping the sensitive mucous membrane continually teased and excited by irritating medicines, when those who prescribe them know, or should know, that such a course as this will almost inevitably aggravate existing disease of this membrane ; that it will, in all probability, superinduce disease where it does not exist ; and as the very least of evils, that it will result in a habit requiring the daily use of cathartics, which must be *increased* in strength and *continued through life* !

As to the diarrhoea, which sometimes is a prominent symptom,

and sometimes alternates with constipation, we believe that in most cases it will yield to the warm bath, the wet-sheet pack, or the wet bandage; and we are glad to find that we are sustained in this opinion by the distinguished writer last quoted.

In cases of dyspepsia, accompanied by depraved secretions and deficient excretions, the free use of water internally as a diluent, solvent, diuretic and diaphoretic is strongly indicated. And in cases of active congestion, inflammation or high irritation of the stomach, the best effects may be anticipated from its *direct* and *immediate* sedative action on the inflamed membrane. It should be taken early in the morning, on an empty stomach, and should be followed by exercise in the open air.

A CASE.—Mrs. —, æt. 22, of delicate and leuco-phlegmatic habit, had an attack of phlegmasia dolens, in Jannary last, from exposure to the bitter cold weather after her confinement. This was followed by dyspepsia, characterized by the following symptoms: “burning” in the stomach and bowels, slight nausea, severe paroxysms of gastralgia, constipation, white furred tongue, palpitation, with great irregularity in the action of the heart; pulse intermittent at times; at times too slow, at other times too fast, etc.

*Treatment*.—Opiates and antispasmodics for the gastralgia and palpitation, which did little or no good. We then resorted to general cold affusions every morning, followed by copious cold water drinking, and exercise, with an occasional pro-renata wet-sheet pack and hip bath, cold. In addition to these means, the wet bandage was worn over the abdomen day and night, until its discontinuance was demanded by a severe herpetic eruption which appeared under it. Soon after this eruption, another “crisis” appeared on the back in the form of angry boils; but simultaneously with the eruptions, all the disagreeable symptoms, the “burning,” the gastralgia, and the palpitation *disappeared*. The only symptoms now remaining are a nervous headache and flatulence, which may originate in debility, or *may* be connected with pregnancy. These symptoms we hope to relieve, by frictions along the spine, with a cold wet cloth, and by the use of small doses of gum assa-foetida, three times a day. It will be noticed that scarcely any medicine has been used in this case. It may be interesting to add, that the palpitation has returned slightly at times, but has always been promptly relieved by the application of a cold wet bandage

over the region of the heart. Cold water enemata always have the desired effect in removing the constipation.

With a very cursory notice of diarrhœa and dysentery we must close this article, leaving the two remaining divisions of our essay for some future occasion. And in the remarks that we may make on these diseases, we will confine ourself mostly to the internal use of cold water, because we have already enlarged sufficiently on the principles of treatment which should govern us in the external application of this remedy in diseases of the mucous membranes; and because we are convinced, both from theory and experience, that it possesses most valuable therapeutic properties when used in this way; but the principal reason why we wish to insist on the internal use of water is, the fact, (for it certainly is a fact,) that there is a strong prejudice among many against this practice. We cannot well see the grounds of objection to the internal use of even *cold* water in diarrhœa and dysentery; and we cannot resist the conclusion, that it originates in erroneous physiological views. The fact is, many seem to be impressed with the idea, that fluids taken into the stomach, pass directly through the pylorus, and come in immediate contact with the lining membrane of the intestines; when physiology teaches us that nutritive matters in a state of *perfect solution* and *water* pass, by endosmose, through the venous radicles of the stomach, and thus into the general circulation. (Carpenter 279.) And we are moreover informed, (by the celebrated Beaumont, we think,) that fluids taken into the stomach are absorbed *like water when poured on sand*. How absurd then the notion that water passes down from the stomach and irritates the intestines! Yes, as strange as it may appear, Dr. Joseph Brown is guilty of this great absurdity; for he says, distinctly, that liquid freely taken "*passes rapidly through the bowels*," exciting griping, and that it must tend to disturb the reparatory process. (Cyclo. Prac. Med.—Art. Dysen.) But another objection, more specious, if not more solid may be urged, viz: that the ingestion of cold fluids may check cutaneous transpiration, and, therefore, that the surcharged vessels must necessarily relieve themselves by increased intestinal exudation; or in other words, by increase of the diarrhœa. To this we would reply that it is in our power, in most cases, to remove the intestinal determination, by diverting the circulation to external parts, and by exciting the action of the skin and kidneys; thus *compelling* these organs to



share in the *onus* thrown upon the intestines. But even admitting that these organs should prove rebellious; admitting that we could not make them perform their part, and that the intestinal discharges would be increased for a time, we would still contend for the use of diluents, for these reasons: the demands for fluids to replenish the serous losses of the blood, and to prevent too great inspissation of this fluid, would be in a direct ratio to the loss of serum by intestinal exudation; and, secondly, if the fluid exuded were introduced by us, there would be no draught, by the increased exudation, on the serum contained in the blood, prior to the ingestion of our diluents. Again, admitting that our physiology is incorrect admitting that water does actually pass directly through the stomach into the intestines, it does not follow by any means that it would be contra-indicated in intestinal diseases; for the second of the above positions would still hold good; and even, the much dreaded cold water in contact with the diseased membrane, would certainly be much less irritating than the undiluted and vitiated secretions and fœcal contents of the intestines. Indeed, so far from water being either positively or comparatively irritating, it is exactly the reverse; and we would consider it a fortunate circumstance, if by any means we *could* bring cold water in contact with *all* parts of the intestinal canal. And as a proof of the happy effects of dilution, we would refer to the delightful action of saline cathartics in dysentery, as prescribed by Professor Dugas. It is probable that the relief in these cases is partly due to the action of the salts on the upper part of the intestinal canal, and the consequent diminution of vascular turgescence, &c., but we are persuaded that the remarkable relief is mainly due to the diluting flood of serum which is poured from the small upon the inflamed surface of the large intestine. The point on which we have been insisting we consider one of the most important embraced in this essay, and believing that our reasoning on this subject is perfectly conclusive, we do hope that physicians will no longer be deterred by groundless fears, from using not only a *safe* remedy, but one of the most *valuable and potent* in intestinal affections.

The next question for us to consider is the best means of availing ourselves of the benefits of water in diarrhoea and dysentery. This is to be done by its external application, in accordance with the principles laid down in speaking of dyspepsia; and by its use as a diluent, sedative, diaphoretic, &c., *per orem et per rectum*.

We will only add a few practical remarks concerning the last two modes. When the skin is hot and dry, and the thirst for cold drinks great, we would allow cold water both in diarrhoea and in dysentery; still, we would endeavor to avoid giving it in excess, especially in cases attended with great debility and relaxation of the intestines, or in what might be called cases of *passive* diarrhoea; in short, we would aim to proportion the supply to the serous loss of the blood, without overloading the vascular system. And this we consider a point of vast practical importance, and one too little regarded; for it is evident, if the fluid portion of the blood be not replenished, that it will become so inspissated by the continued serous drain as to be incapable of passing through the minute capillary vessels of the system, thus producing stagnation, suspended functions, and death. And even when the skin is moist and perspiring, this should not cause us obstinately to resist the demands of nature for cooling drinks, provided we keep up a determination to the skin by frictions, baths, &c. For it should be remembered, that we do not so much desire profuse perspiration in these cases, as we do a centrifugal determination of the fluids, and equalization of the circulation. Cold injections in dysentery, we have found to be a most valuable remedy; indeed, we think more highly of simple cold water in this way than any thing else, unless it be the nitrate of silver in some cases of ulcerated rectum, etc. They should be used after each evacuation. And finally, we will in conclusion, express two opinions which some may consider wild and utopian; they are these:

1st. If water be used externally and internally, in accordance with the principles advocated in this article, in diarrhoea and dysentery together with saline cathartics, in the latter disease, we will have but little use for calomel and the lancet.

And, 2d. If we *judiciously* avail ourselves of *all* the remedial virtues of water, together with hæmostasis and veratrum, in cases of excessive vascular excitement, they will be found sufficient even for the most formidable inflammatory diseases which we may be called upon to combat.

NOTE.—In Dr. Wilson's article, contained in our October number,

On page 579, second line, for "waters," read *water*.

" " 581, 14th line from bottom, for "promising," read *premising*.

" " 583, 9th " " top, for "active," read *actual*.

" " 587, 8th " " bottom, for "first," read *just*.

## ARTICLE XXXIII.

*A Case of Eccentric Traumatic Tetanus.* Reported by H. R. CASEY, M. D., Appling, Ga.

DEAR DOCTOR—Thinking the case I am about to relate to you, may be not without interest to the profession—particularly to the junior members—I send it to you in a form, which if you think deserving a place in your valuable Journal, you are at liberty to place there.

Some ten days since, I was called in great haste to see a negro man belonging to Messrs. Kirkpatrick & Leitner, at Berzelia, on the line of the Georgia Railroad. On arriving there, and inquiring of Mr. L. the condition of the patient, he gave me the following short history of the case :

Early on the morning of the day previous the boy came in complaining of a severe "pain in his belly." Mr. K. thinking from his actions and his apparent great suffering that it was a case of cramp colic, and believing that active catharsis would be most likely to relieve him, gave him a dose of ol. ricini. During the course of the day there were slight manifestations of the effect of the medicine, but with no alleviation of the symptoms. Mr. L. did not see the boy until night, when he took charge of the case. He was at once satisfied that it was not cramp colic, but could not liken it to any disease he had ever met with: such violent spasm he had never before seen—the boy in the interval seeming to be well. He gave him a dose of oil and turpentine, antispasmodics, cups to the nuchæ. The spasms continued even on throughout the entire night. On the next morning, finding the case increasing in intensity, he dispatched a messenger for me.

Living some twelve miles distant, I did not see the case until 3 o'clock P.M., which was some thirty-two hours from the incipency of the attack. I entered the cabin and found the boy lying on a pallet on the floor. Taking my seat by his side, I commenced to catechise him as to his feelings, etc. There was no febrile heat; the pulse frequent, small, irregular and feeble; the respiration short, hurried and anxious; profuse perspiration on the face; tongue slightly coated, with marks of violence on its surface. There was no mental disturbance; and up to the time of the examination there was nothing to mark the character of the disease, by which a true diagnosis could be formed. As the only complaint



of pain the boy had made was located in the abdominal region, I threw off the cover to sound the condition of things there—when, from the effects of a fresh current of air upon his body, a most awful and violently painful spasm seized the patient, followed by some three or four “more of the same sort,” in rapid succession, producing complete rigidity of all the muscles, from the occiput to the insertion of the tendo achillis, the body forming from those two points a perfect arch. Synchronous with these violent spasms there was most excruciating pain; the corrugator supercillii, orbicularis, and other muscles of the face were so drawn as to give to the countenance a most agonizing expression—the true Risus Sardonicus. The recti abdominis muscles were prominent, and as hard as a board. There could be now no mistaking the disease: Tetanus, of the opisthotonos variety.

Believing true idiopathic tetanus to be of very rare occurrence in this country, I enquired of his owners, if the boy had received any injury of late. They thought not; but one of the servants spoke up, and said he had “run a splinter in his hand.” Mr. L. then informed me, that “some fourteen days back he had a splinter extracted from his hand; but that after that he had heard but little complaint, and he really could not think that so slight an injury could be productive of such a result.” I examined the hand, and saw by a *slight swelling* and *scar* where the splinter had penetrated. I stated to the owners of the boy, candidly, my opinion of the case. That it was a case of tetanus; that it proceeded, in my judgment, from the hand; and that the disease was a mortal one.

My prognosis was based upon the very great mortality of traumatic tetanus, under every variety, and all kinds of treatment.

Hippocrates affirms that tetanus supervening upon a wound is mortal; and the experience and observation of the modern fathers do not set aside or gainsay this aphorism. Besides the *length of time*, the *increasing intensity* of the paroxysm, I looked upon as but the harbinger of death. I felt it, however, to be my duty to grapple with the fell destroyer; and armed with the weapons used upon such occasions, I made fight as best I could. I applied a long blister down the spine; gave him 50 drops of tr. opii., with a half tea-spoonful of chloroform, to be repeated *pro re nata*. Asafoetida, turpentine, camphor, formed a part of the treatment. I administered to him, at the approach of each and every paroxysm,

chloroform by inhalation, with no sparing hand. Finding no great rigidity of the sphincter ani, enemata of oil and turpentine were administered.

The above means were put in practice, and after three hours persistence, and finding no modification of the symptoms, I had the patient put into a bathing tub partly filled with a strong infusion of peach leaves, as hot as he could bear it. This seemed to have some good effect, for while in the bath, the whole body became entirely relaxed: all the muscles, which before were hard and rigid, now became soft and relaxed. The shades of night were thickening fast, and engagements requiring my attention in other localities, I left my patient in the tub, and was soon on my "winding way."

I had made arrangements for a physician to see the boy, and remain there for the night, and I had promised (nothing preventing) to be with him again early on the morrow. At sun-rise the next morning I was at the side of my *doomed* patient.

According to the programme, a physician from your city saw the boy in two hours after I left him, and remained with him till 3 o'clock next morning. There was no disagreement between us, in the diagnosis, save on its etiology. He thought the wound in the hand too trivial—not cause enough there for such a terrible effect. He was rather disposed to locate the *fons et origo* of the malady in the primæ viæ. There was nothing abnormal in that region so far as I could detect, except the constipation, which, so far as my experience and observation extends, obtains in all cases of tetanus.

The same treatment was kept up; but *dashed* with 20 grs. of calomel, ol. ricini and croton oil, in accordance with his theory.

As I anticipated, Mr. L. informed me that so soon as the boy was taken out of the bath the spasms returned in all their violence. The patient remained in the bath for a half hour, and during that interval there was not even the sign of a spasm; and that such was the extent of the relaxation that his mouth, which before he could but imperfectly open, gave forth one of those *wide, long, characteristic gapes* or *yawns* of the negro.

The history of the case through the past night, added to the former "*record*," made, in my mind, "confirmation strong as proof of holy writ," that the patient was *doomed*—beyond the power of the "healing art."

Having given the case the *benefit of trial* of all the remedial means within my reach, I remarked to the owners of the boy, that if they were so disposed, they could have the *offending member* "cut off"—that amputation was at one time resorted to in such cases; but that I could not promise them even a hope of success from the knife. I neglected to mention that, acting upon my theory of the disease, the first thing I did after seeing the case was to cut down upon the wound, which I did by making two long incisions and thoroughly cauterizing them.

Mr. L. replied, that the *cost* must not be taken into the account; that the boy was a favorite servant—had been faithful and honest, and that he would pay twice the value of the boy to have him saved.

It is recorded in the authorities, that at one time Port wine was extolled as a remedial agent, in tetanus, of great value. A favorite horse was seized with tetanic spasms: the owner ordered the wine *without stint*; the horse recovered; and in footing up the bill the cost of the wine exceeded the intrinsic value of the horse.

Appreciating Mr. L.'s feelings of humanity, I dispatched a messenger with a letter to you, giving you the full particulars of the case, desiring you to come up with your amputating case, if you thought there was even the remotest prospect of success from the operation,—but you were not at home.

I remained with this patient until 1 o'clock P.M., when in death he found the only quietus to his sufferings.

From the time of my first seeing the case to its termination, some twenty-two hours, four ounces of chloroform were used; and I cannot say that I ever saw the least benefit from it. I gave it myself, when with the boy, and watched its effects closely, and if the boy was at any time under its influence I could not see it. The same may be said of all the other means, with one exception, of which mention is made before. He would drop to sleep during the lull of a paroxysm, but only to be awakened by its recurrence. But during sleep, there continued the *tonic rigidity*: hence I could not infer that the temporary sleep was a *quid pro quo*—from the agents employed that the sleep suspended the paroxysm—but rather was the result of their suspension; which last was from the prostration from the disease. The least noise was jarring to his extremely sensitive nerves; the prick of a pin; the act of swallowing—all, but served to bring on the spasms, which were



indeed awful to look upon, but to the unfortunate sufferer *agonizing agony*.

Sir Gilbert Blane is said to have mentioned a case of tetanus, where the patient is reported to have suffered *no pain*, but rather described it as an agreeable sensation. If this be true, there must have been a *perversion* of the sense of feeling.

This boy gave unmistakable evidence of the most intense suffering. And the cramp colic, for which the boy was first treated, was but a cramp of the diaphragm, the scrobiculus cordis being the locality of greatest suffering in tetanus.

I omitted to note the fact, that *foul play* had been suspected; and my opinion had been asked as to the poisons—"if there was any known poison that would produce symptoms at all analogous to those manifested in the case. I replied that strychnine would: that it was exceedingly difficult to distinguish between tetanic spasms and those produced from an over-dose of strychnine. I remarked, however, that I could very easily, I thought, verify my diagnosis of the case; that by dissecting off the skin from the hand over the wound, I expected to find the wound *internally* giving more evidence, or marks, of the splinter than was observable on the outer skin. I should expect to find some pus—probably some portion of the splinter, and the surrounded tissues softened, lacerated, or otherwise altered from a normal appearance. And that if I did not find the condition of things there to warrant the charge of causation, by their permission, a general post-mortem would be instituted. This was agreed to very readily, as the owners of the boy were desirous of having their minds satisfied.

I dissected and reflected the skin, and beneath I found a quantity of pus burrowing in the tissues; three portions of splinter, in and immediately beneath the extensor tendon of the ring finger. The tendon itself was partly disorganized, and throughout its structure, so far as observable, presenting an abnormal appearance. I did not push my investigation to examine the condition of the nerve, but in all probability the corresponding nerve of the dorsal collateral branch was implicated in the wound.

Here, then, in my judgment, was the focus of the disease, though the tendinous origin of tetanus is doubted by some of the authorities. The examination being very satisfactory to myself and the owners of the boy, a further exploration was deemed unnecessary.

Now, what are we to expect from this? Not that tetanus will

be the result of all such wounds; for how often is it we see wounds, even worse than the one described, going through the regular stage of *suppuration* among *tendons* and *nerves* to a healthy *resolution*, and no tetanus supervening. And again, we see *causes* even more *trivial*, bring on tetanic *spasms* and *death*.

The reasonable deduction is, (based upon past experience,) that there is a marked predisposition in the *African*, from some *peculiarity of constitution*, to traumatic tetanus—aided by the *exciting causes* which are sometimes necessary to its development.

I would also remark: about the time of the boy's attack, the temperature of the atmosphere was exceedingly high, the thermometer ranging from 98 to 102, for five or six consecutive days.

In taking a retrospect of this case, I would in the first place remark: the great susceptibility of the negro to tetanus—the importance of inquiry into each and every case of tetanic spasms, as to any *injury* having been received—the fact that the *injury* is *slight*, or the *wound trivial*, is no guarantee that the cause or origin of the spasms is not located there. I would also call attention to the very great insusceptibility to the impression of remedies, as evidenced from the vast amount of chloroform used, and its perfect insignificance to combat with the formidable malady. Homœopathy! where are thy charms in such a conflict? When four ounces of pure chloroform, potent as it is, is as so much water, to the enemy, what say you, with your “*thousandth part*” of NOTHING? When *fifty drop doses* of laudanum fail to lull, can “sleep to the eyes or slumber to the eye-lids” be expected from *Infinitesimal Homœopaths*?

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*Remarks on the various operations for removing Calculi from the Bladder of the Female, with a new Method.* By GUSTAV C. E. WEBER, M. D., of New York.

The methods of removing stone from the bladder of females are many, there being hardly any point where the bladder has not been entered in order to achieve this object. But if we consider all the advantages and disadvantages of the different methods hitherto known, we find they are *all, without exception*, very frequently attended with evil consequences, which are more to be dreaded than the original complaint itself.

In order to justify this latter assertion, I will recapitulate all the different operations practised for stone, on females, to the present

time, and compare their indications and contra-indications so as to show that in reality they ought to be carefully and prudently weighed before undertaken. If rashly performed, we bring upon our patients a source of suffering by far greater than the one we promised to relieve, or even endanger the lives that were given into our hands for protection.

In connection with the methods which I find recorded in the newest editions of our standard works, I shall bring before the surgical public a new plan by which I removed a stone of an inch and a quarter in length, and three quarters in width, weighing about three ounces, from a lady of fifty-four years of age, and effected a radical cure without leaving any troublesome symptom whatever.

The various operations of lithotomy may be classed under five heads:

I.—The high operation.

II.—The gradual or instantaneous dilatation of the urethra.

III.—The operation underneath the symphysis pubis entering the bladder by dividing the urethra and the neck of the bladder.

IV.—The operation underneath the symphysis pubis without dividing the urethra.

V.—The operation underneath the symphysis pubis with division of the urethra and dilatation of the sphincter.

1. *High Operation*.—The high operation (*lithotomia hypogastrica*) has been known since Franco, in the year 1561, performed it on a small child, where he could not extract the stone on account of its great size. But still, with the exception of a few men who practised Franco's operation, (Rousset,\* Nicholas Piètre,†) it found but few advocates until the last century, when Douglas,‡ Middleton,§ and Cheselden,|| in England, and Morand,¶ in France, classed it among legitimate operations in surgery.

The object of the operation is to enter the bladder by cutting through the abdominal wall in the line of the *linea alba*, just above the symphysis pubis, through the space formed by the reflexed peritoneum, the symphysis, and the bladder.

In order to accomplish the latter many methods have been described. Franco performed his operation by introducing into the anus the index and middle finger of the left hand, and with them

\* Rossetus de part. Cæsarea cap. 7. Dionis chirurgia. Cap. vom. Steinschnitte. Garengot pag. 358. Tom. I.

† N. Piètre a Mercier Thes. anat. ad extrahendum calculi. dissecanda ad pubem vesica.

‡ John Douglas, *Lithotomia Douglassiana*, with a course of operations. London, 1714.

§ Middleton. A short essay on the operation of Lithotomy, as is performed by the new method above the pubis; to which is added a letter relating to the same subject, from Macgill and Dr. Douglass. London: 1727.

|| W. Cheselden. A treatise on the high operation of the stone. London: 1823-8.

¶ S. Morand. *Traité de la taille au haut appareil*. Paris: 1747.



pushing the stone upwards just above the pubis, and then, with a small scalpel, cutting down through all the intervening tissues until the stone was reached, by continuing the pressure from below upwards, the stone escaped.

This way of operating resembles the one of Celsus\* for the lateral section, and was soon superseded, like the latter, by the more prudent and careful method of Rousset, in the year of 1580.

This eminent surgeon divided the operation into four different steps:

*First.*—Dilating the bladder by gradual injections of warm water, and compressing the urethra.

*Second.*—Cutting through the abdominal wall, just above the symphysis, reaching the bladder, where it is uncovered by the peritoneum, carefully avoiding the same.

*Third.*—Making a small opening in the bladder, just behind the symphysis pubis, with a pointed bistoury, and therein inserting a probe-pointed concave bistoury, and enlarging the opening upwards to a sufficient size.

*Fourth.*—Extracting the stone by means of the finger or a suitable stone forceps.

In nearly the same manner, with but slight modifications of the instruments hitherto used, Cheselden, Middleton, and Douglas operated and followed, in fact, Rousset, who, undoubtedly, can be considered the first who undertook the high operation methodically.

Morand, of France, after cutting through the linea alba, inserted the index finger of the left hand into the upper extremity of the wound, and by that means pressed the peritoneum upwards, then split the bladder downwards behind the symphysis pubis. After this act he introduced his index finger into the bladder, and held it up until the stone was extracted either by the fingers of the right hand or by a suitable instrument.

But, so much was the attention of surgeons then directed to the invention of new instruments, that this, the best *modus operandi*, was again modified by Frère Côme.† Rousset's method seemed not to guarantee to him the entire safety of the peritoneum, and he therefore substituted his method, which deviated from the former operations by introducing into the bladder, through a second incision made in the perineum, and the membranous portions of the urethra, his *sonde à dard*. This sound contained a triangular stilet, which was grooved on its anterior surface. After the bladder had been laid bare by the section above the pubis, this stilet was pushed through the walls of the bladder, then drawn upwards and using the grooved surface as a director, the bladder was laid open by extending the incision downwards. The irrationality of augmenting the dangers of the operation by a second incision in the perineum, did not find many advocates.

\* *Methodus cum parto apparatu.* Cel. Libr. VII. Cap. 26.

† Frère Côme. *Nouvelle methode extraire la pierre de la vessie pardessus le pubis.* Paris: 1779.

But his sound was, and is still, used in France, with many slight modifications, by introducing it through the urethra.

At the present time, in America, England, and Germany, where the *armamentarium chirurgicum* has been reduced to a rational size, Rousset's operation is generally performed with this modification,—that, before opening the bladder, this viscus is hooked up and held by sharp hooks, so that no regurgitation, and consequently, infiltration of the urine, can take place. Professor Pitha, of Prague, in his article, "Diseases of the Genital Organs," in the *Handbuch d'Spez. Path. u. Ther.*, edited by Prof. Virchow, gives his opinion as to the superiority of the latter method. This concurs with the experience of my estimable friend, Prof. Parker, of this city, which he has presented in his valuable paper on the high operation for stone in the female.\*

I have performed, in the same manner, very recently, the high operation upon a small boy of four years of age with the best success; the little patient passing his urine through the urethra as early as the fourth day. On the twelfth day he ran about in the yard, the wound being nearly closed.

I found it an important point in the operation to separate the peritoneum with the finger, gently, sufficiently high to expose the urachus; then pushing the same upwards to make the incision into the bladder, just underneath the urachus, downwards to a necessary size. After the stone is extracted, the peritoneum falls forward over the wound in the bladder, and through a slight adhesive inflammation closes it in a few days. If the incision is made lower down behind the symphysis pubis, down to near the neck of the bladder, then the peritoneum cannot reach it, and I should judge that then it would take more time to close the opening of the bladder. I also consider the introduction of sponge or lint through the external wound into the bladder for the absorption of urine or pus, as injurious, also the leaving of a catheter in the urethra, which gives rise to pain and uneasiness. The external wound ought to be kept constantly clean by means of a small piece of sponge moistened with fresh water. Every other bandage is injurious. Infiltration and consequent formation of pus in the cellular tissue in the space uncovered by the peritoneum, are not much to be feared, because if left unobstructed by tents or bandages, the least quantity formed will readily flow out of the external wound. To the great variety of methods of treating the wound after this operation, I believe we may ascribe the bad success attending the operation in its infancy.†

\* New York Journal of Medicine, March, 1855, p. 252.

† If we run over the statistics of the lateral, as well as the high operation, without the least prejudice against one or the other, we find the true per centage of mortality about equal. In the lateral section, I think, the good result is always noted down, but not the bad consequences, which are liable, even with perfect success of the operation itself, to follow after, as, for instance, "impotency." I consider this an important point, in the discussion as to the superiority of either method.

I look upon the high operation, when properly performed and managed, as *sine dubio*, the best way of removing stone from the bladder of the male, and, also, under certain circumstances, of the female, but only such as exclude the possibility of extracting the stone by the method which is hereafter described.

We cannot, however, deny the danger of the operation, the possible peritonitis, and the fatal results which have followed, when it has been performed by the greatest surgeons. When we consider the statistics, which exhibit a mortality of one in six, or one in seven, I am sure the great mass of surgeons will rather risk an incontinence of urine in the operation underneath the symphysis pubis, than risk the life of their patients by the high operation. I should prefer the high operation only in exceptional cases (as where the stone is uncommonly large and hard, or the urethra and vagina so much diseased that a division with the knife would be fatal); and I, therefore, cannot concur in the opinion of Prof. Parker, who considers the epicystotomy the safest method of removing a stone from the female bladder.

We ought to have an operation which does not endanger the life of our patient, and still achieve its object. We find that there are operations practised in a different manner, that can avoid the former and lead to the latter. We will briefly recapitulate them, and see in what regard they are preferable to the operation just described, and what are their disadvantages and contra-indications.

Among the operations that were practised principally for the removal of stone, was the dilatation of the urethra, by means of compressed sponge, roots, specula, or dilators expressly invented for the purpose.\* Heister's observation, that pretty large-sized stones would sometimes pass away with the urine, with pains similar to those of labor; and Middleton's case, in which a woman forced, during a hard attack of tussis convulsiva, a stone weighing four ounces, through her urethra, led to the experiments with gradual, as well as instantaneous dilatations of the urethra, and consequent extractions of the stone with a suitable pair of forceps. Although there are cases on record from Douglas, Broomfield, and A. Cooper, men who merit our highest esteem, we still must consider this operation as one only practical in very *exceptional* cases.

I have examined women of young and robust constitutions, whose urethra I could enter with the greatest ease, with the index of my right hand, up to the sphincter, but I think that the urethra of a female suffering a year or more with calculus in the bladder, is a "*noli me tangere*," that will not allow even a slight dilatation, much less a dilatation that will allow a stout pair of forceps to pass holding in its grip, its prey, in the form of a calculus of an inch or two in diameter, without laceration of the mucous and muscular coats, and consequent incontinence of urine. Besides this lacera-

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\* Heister, Chirurgie, 1728.



tion of the parts, there is the extreme pain that ought to be considered, and which is so excessive, sometimes, that it cannot be endured without endangering the life of the patient. Fortunately for the poor, suffering females, this proceeding of dilatation *as a method*, has now been abandoned by the better surgeons of the day, and the knife takes the place of the compressed sponge to relieve them from this troublesome companion.

The operations with the knife have undergone many changes since the time when Celsus performed, after his method, by which he removed stone from both sexes. Lisfranc\* imitated Celsus in the invention of his method, the so-called "*Vestibular Section*." He entered the bladder by making a semilunar incision, with its convexity towards the pubis, commencing to the right of the urethral orifice in the same plane as the urethra lies, about one line from the pubic arch, and carrying the knife from the right to the left side, ends the incision in the same plane wherein the section was commenced. Then the cellular tissue is carefully divided by the handle of the scalpel or the finger, until the anterior wall of the bladder is reached, which is subsequently opened by a second incision to the necessary size for the extraction of the calculus.

Every one conversant with the surgical anatomy of the parts, knows that even the most extensive opening here is not sufficiently large for the removal of a medium-sized stone without laceration, and that it is very difficult to make a large incision without injuring the internal pubic artery. From these two important facts, the vestibular section is objectionable, and not to be selected for the purpose of removing calculi from the bladder of females.

There is another method by which, through vertical section, the sphincter, the neck of the bladder, and vaginal wall are divided. It is the method of Kern,† but Marianus operated by making a lateral section between the urethra and the ischium, and entering the bladder at the sphincter, which he divided with the neck of the bladder after the method of operation in the lateral section on the male, but with this operation we risk, just as in the vaginal section, where the posterior wall of the bladder is incised, the possible consequence of a vesico-vaginal fistula. The history of the operation shows, that in the plurality of cases, this most dreadful of all complaints followed the undertaking. It is possible, that with the application of Dr. Sims' clamp suture, which has justly gained so much celebrity in America, that these consequences might be obviated, but still we possess no facts to guide us, and till we do, Kern's operation, as well as the vaginal section, ought not to be performed under any circumstances whatever. A vesico-vaginal fistula is more to be dreaded than the suffering with stone.

\* *Memoire sur une nouvelle methode de pratiquer l'operation de la taille chez la femme*, Paris, 1823.

† Kern. *Die Steinbeschwerden der Harnblase, ihre verwandten Uebel und der Steinschnitt beiden Geschlechtern*. Wien, 1828.

We come now to the consideration of the methods by which the whole urethra and the neck of the bladder were divided, and we find here again a number of modifications which were used. *First*, we have the lateral section by which the urethra and neck of the bladder are divided, on a sound downwards and obliquely in the space formed by the vagina, the descending ramus of the pubis, and the ascending ramus of the ischium. In order to make this incision either the sound of Paré, of Rudtorfer, and Potts' probe-pointed bistoury, Langenbeck's lithotome, can be brought into action, as also the gorgerets of the English, or Frerecosme's lithotome-caché, *Second*, we have the horizontal section, by which the urethra and neck of the bladder is divided horizontally; *third*, the *superior vertical section*, and lastly, the *inferior vertical section*. In all these operations, the sphincter and neck of the bladder are divided, which leave, as the result of the cases in which they were used shows, very frequently, an incontinence of urine. We can easily explain why this system, in most cases, must necessarily follow: the urine that flows out of the divided neck of the bladder cannot escape readily; it has to pass through parts in the lateral, as well as in the horizontal, superior or inferior vertical section, that are filled with nothing but cellular tissue, the consequence often is infiltration of urine, inflammation, formation of pus near the wounds in the bladder, which destroys the possibility of re-union by first intention. We all know, then, how difficult it is to bring about a union of a wound of the bladder, if not by first intention. For these reasons the operation in which the urethra, sphincter, and the neck are incised, are not safe proceedings for the benefit of females that seek relief from the suffering with stone.

We have now spoken of all the different operations that were entitled to be classed among the legitimate methods of proceeding, for the removal of stone in the bladder. We have still remaining the few exceptional cases. The study of these led me to resort to quite a novel method as this review of the various operations will prove, and which justifies the title of this article, "*A new method of Lithotomy.*"

Paré has left a description of a proceeding, although not very distinctly expressed, by which he only divided the urethra, dilated the wound, with his dilators, pressed the stone by means of two fingers introduced into the vagina, into the neck of the bladder, and extracted it with hooks or the forceps.

Lecat introduced a *Georgeret à sonde cannelée* into the urethra, divided it with a urethrotome, without reaching the sphincter. He then introduced the gorgeret through the sphincter, and dilated it with his instrument, and with one of his fingers.

In the like manner LeBlanc, operated with his gorgeret, and dilators, dividing the urethra towards the left and the pubic arch.

Rust split the urethra after the manner of the lateral section, and then dilated the neck of the bladder with his finger.

Dionis, Tolet, Greenfield, Ledran, Sinz, Lorenz Colot, and Fergusson, have operated on the same plan, by partial or total section of the urethra, and dilatation of the neck of the bladder.

Now, this plan of Paré, Lecat, etc., etc., is indeed the best, and most simple method that we have met with, and it is surprising that it is so seldom employed. There is, however, yet a modification to be substituted that seems to me most essential for the success of the operation. By this plan, through the division of the urethra, this part of the urinary organs comes out of the care of the operator, because then he can reach the bladder, without forcing his way through, so that no laceration, and consequent paralysis of the muscular fibres can follow. The only error these last mentioned operators fell into was, that they all divided the urethra either upwards or horizontally, or laterally, which gave rise to the inconvenience that we have already mentioned, that is, the urine could not flow off easily, and would give rise to the infiltration in the cellular tissue that lay laterally and superiorly around the urethra. The reason of their proceeding thus was because they thought in case the divided urethra did not unite, they must preserve some kind of a canal for the urine to flow in. This caution was, according to my experience, not necessary. In my case, where I divided the urethra in the median line, downwards, I found that after the operation, the patient, after the bladder was well filled by an injection with water, could throw a stream of water in a semicircle about half a yard. This showed to me, that the reunion of the urethra is not of so much importance for the ejaculation of urine as is generally believed.

The only question that merits consideration now is, will the sphincter and neck of the bladder, after the division of the urethra bear the instantaneous dilatation, to a sufficient degree for the extraction of a good sized calculus. My opinion is, that they will not, and that when we undertake to force the sphincter open by instruments, or by the finger, beyond a certain limited extent, that we risk the same possibility of an incontinence of urine, as when we undertake to operate by dilatation alone. I certainly believe that the sphincter is dilatable to the size of three-quarters of an inch in diameter, because I find that this is, with slight variation, the ordinary size to which the sphincter opens for the evacuation of a full bladder. To prove this, I have distended, in my case, the bladder by an injection of warm water, after I had divided the urethra, as I before mentioned, and then directed my patient to empty it with as much force as possible. While she was doing this, I could introduce, with the greatest ease the index finger of my right hand up to the second joint into the bladder.

To dilate the sphincter beyond this extent I consider, as I have said, to be very hazardous indeed, and we, therefore, should select a *modus operandi*, by which it will not be necessary for the extraction of stone to open the sphincter beyond the natural capability for dilatation.



We find such an auxiliary remedy in the great *armamentarium lithontripticum*, if we select from it an instrument that can break the calculus into three or four pieces. If the calculus be of a brittle composition, as in the generality of cases, a small pair of forceps, whose blades are narrow but stout, will effect this object. If the stone is hard, which is very seldom the case, the straight drill of Civiale, or some other instrument will suffice, being guided by one finger, to take hold of the stone, and break it immediately. The fragments will be removed through repeated injections of water, or with a suitable pair of forceps without stretching the sphincter to such an extent as to cause laceration, and consecutive paralysis.

With this proceeding we combine lithotomy and lithotripsy to a harmonious union; we perform lithotomy in order to be able to exercise lithotripsy, and remove the consequences immediately after. Without the previous urethrotomy, lithotripsy, would be tedious, and could not be (as much as Heurteloup says, about the performance of lithotripsy in one seance, I cannot believe it,) fulfilled in the space of from ten to fifteen minutes.

These are the considerations which I acted upon in the execution of my operation with so much success, and which I now bring before the surgical public, so that imitation might prove what I believe it to be, that this operation is the solution of the question: "*Which is the best mode of extracting calculus from the bladder of Females?*"

CASE.—On Monday, the 6th of March, I was called upon to visit Mrs. Rehr, a lady of 54 years of age, residing in 46th Street, between 8th avenue and Broadway, who was suffering, as I was told, upwards of two years with a disease of the womb and bladder. Upon examination, I found no pathological condition whatever, except the existence of stone, and consecutive great irritability of the bladder, with slight purulent discharges therefrom. Proposing an operation, my patient was willing to submit to everything in order to get rid of her sufferings. For that purpose I undertook, March 13th, the operation which was commenced by emptying the bladder and the rectum. The patient was laid crossways on the bed in a position so as to elevate the pelvis, and expose the parts sufficiently for the manipulations. My assistant, Mr. S. J. Holley, then, with his right hand held the labia majora and minora well apart, and with the left pressed with a gorgeret the posterior wall of the vagina downwards. I then introduced a curved sharp-pointed bistoury (Wutzer's for the operation of fistula ani) protected by a conductor into the urethra, withdrew the conductor and plunged the point of the knife through its posterior wall, about one line from the sphincter, and then divided by drawing it downwards and outwards, the urethra in the median line. After this step having been taken, I introduced into the sphincter the point of a syringe, and injected the bladder with tepid water.

Then, while the woman evacuated this injection, I introduced my finger, and on my finger a pair of narrow polypi forceps, grasped the stone, and with some pressure broke it into five pieces. After this another injection of water was made, and the woman directed to empty her bladder forcibly; on doing this, three pieces came away. The other two I took away with the forceps, using my finger as a guide to bring, with care, the fragment between its branches.

After I ascertained that every particle of stone was extracted, I directed the woman to lay quietly on her back, and have the parts frequently well sponged with cold water. Hardly any reaction took place. The patient could retain her urine always, and has never had any trouble with her urinary organs ever since; the soreness of the parts disappeared in the course of four or five days.

The two anterior thirds of the urethra did not unite, but still there exists no difficulty in passing the urine with a good stream.

This is in short the history of my operation, the success of which was exceedingly satisfactory to myself, as well as to my patient.

[*N. Y. Journal of Medicine.*

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*On the Ill Effects arising from the Excessive Smoking\* of Tobacco.*

Memoir of Dr. GINSEPPE LEVI, read before the Society Medico-Fisica of Florence, 1855. (Translated for Charleston Medical Journal and Review, by F. PEYRE PORCHER, M. D.)

It is with great satisfaction, gentlemen, after having many years reflected upon it, that I can take up, in the bosom of this academy, this grave and important subject of public and private hygiene. And surely if the meditating upon these facts which avail to render less difficult the practice of our art is fruitful in utility—if it is interesting to trace the many bonds which from the different sources from whence our science is constituted, every day go on extending, I think the gravity and the dignity of the work to which we are called does not show itself in any way more strikingly and distinctly than in the conscientious freedom with which we lift up our voices to invoke laws by which human safety may be better directed; or opposing the weight of our authority against certain uses and habits, the practice of which tends so frequently to impair and weaken the strength of the body.

I do not think, then, that I can better entertain you to-day, than by referring to the evils which arise from the *excessive smoking* of tobacco, which in our days we see practiced by every age, sex, rank and order of citizen.

In the civil life of nations every thing changes with the lapse of

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If the ill effects resulting from the smoking of tobacco to excess are shown to be so great, with how much more force must the observation apply to the American who uses it in so many ways, and with so little moderation.

time. New laws succeed to old ; inveterate customs disappear by degrees, giving place to others which follow ; obsolete ones are restored, and vices and habits which at first seemed the heritage of but few, acquire dominion over whole communities. The leaf of the tobacco, introduced in Europe, as it is known, in the second half of the sixteenth century, was at the beginning received with prodigality of praise by some, and by others was covered with blame. Amid this approval and condemnation—between the pontifical bull which interdicted, and the princely edicts which sought to limit its sale to the pharmacien, the use of the weed extended itself beyond bounds. Many governments appropriating to themselves its exclusive preparation and sale, it became the source of immense wealth. Now, in France, according to Michel Levy, sixteen thousand millions of killogrammes are consumed, two-thirds of the best of which is smoked. Whoever will take pleasure in examining the statistics of other countries, and of our own, will see that proportionally to the different populations the example of this is closely imitated.

It could not be otherwise, since from corners the most remote, to cities the most populous—from the cabin of the poor, to the mansion of the wealthy—from the humble workshop of the artizan, to the bureau of the statesman—wherever you encounter any one, weak or strong, during any hour of the day, he almost incessantly emits smoke from his mouth. And do you not feel yourselves moved with indignation at seeing in the public streets children, who have scarcely completed their second lustrum, who seem to take pleasure in smoking, as if it was something reflecting honor upon them, or gave cause to hope well for their youth, and for their manhood?

How shall we describe the disgust which arises at entering, in our days, places of meeting, halls for public spectacles, among a pleasant company, but where you always find yourself in the midst of a thick cloud of smoke which disturbs, saddens, and annoys you, without even the liberty of complaining, unless you wish to incur the blame for superfluous delicacy, or for being too rigid a censor of the times. What thing more disagreeable than the conduct of certain persons who nevertheless come to ask your advice respecting some grave infirmity of the stomach, or that tubercular phthisis threatens to cut off their life, or, indeed, any as yet slight affection upon which apoplexy may supervene, nevertheless they do not for a moment abstain from the wretched habit of smoking, neither fearing that this conducts them to graver danger, or that reproach for what is so imminent will fall upon them. That this habit does not create more either of surprise or disgust, is singular, when we reflect upon the physical and chemical qualities of the *Nicotiana*, when we call to mind the effects produced by experiments with it upon the animal economy ; when, in fine, in the works of classic writers we find descriptions of diseases not unfrequently produced by smoking this plant. This, indeed, for which so many feel so



great, so irresistible a longing, is really one of that family of solanaceæ at the mere mention of the name of which many are alarmed: it possesses an acrid, pungent, disagreeable taste—strong, disagreeable odor, produces in him that ingests it, either in one form or another, first a sense of anguish at the stomach, heart-burn, nausea, and vomiting, then atrocious intestinal pain, accompanied with diarrhœa, a coldness of the extremities, viscid, sweaty, a diminution of the cardiac pulsations, a considerable bluntness of nervous sensation, and, in fine, according to Orfila, narcotic poisoning. Chemistry discovers in it those principles to which, in great measure, its poisonous action is due. Nicotina and nicotianina are substances the murderous effects of which are only surpassed by prussic acid. The empyreumatic oil of this, Albino and Fontana studied among the first, and of which the experiments of Brody indicate such activity, that a few drops are sufficient to destroy an animal. And these principles, we repeat, actively hurtful, the modern chemist knows to be unfolded during maceration, and in an equally marked degree during combustion of the leaves, the physiologist attesting its injurious influence upon animals and man, not only when it acts directly upon the nervous system, but also when introduced into the organism alone, or combined with other principles through the digestive canal or the respiratory organs.\* These observations serve to explain certain facts and furnish analogical arguments sustaining the opinions expressed by us above: we mean the effects produced in those who remain entire days occupied in the many operations necessary to prepare the leaves for the various uses to which it is destined. Bernardo Ramazzini, with that profound genius and vast learning with which he was gifted, described in black colors the affections of the brain, lungs, and stomach, from which the manipulators of the weed suffered, and which the dust of the plant smoked produced.† The opinions of the Hippocrates of Modena receive confirmation in the facts since observed by Fourcrois, Percy, Patisier, and Merat ‡ The last mentioned, speaking of the workmen employed in the manipulations, describes them as thin, anæmic, yellow, asthmatic, subject to colic, to narcotism, to diseases more or less acute of the thorax; and concludes by saying, that a substance so useless as is tobacco, causes innumerable evils, and even death, in those employed in preparing it for others, the most insignificant of pleasures.§ Parent-Duchatelet, and Darcette, first followed by Simon, deny what many other physicians asserted from Ramazzini down to Merat: for this reason so important a controversy of public hygiene, at the desire of the Academy of Paris was taken up, in 1843, as a special study by Dr. Melier. These, after a long and conscientious investigation, came to the persuasion that during large operations with tobacco, the principal injury befell those who,

\* Trousseau et Pideaux *Traite de Therap.*

† *De Morbis Artificum.* Londini, 1718.

‡ Michel Levy. *Op. Cit.* p. 763.

§ *Diction. des Sci. Medicales.* Art. Tabac.

in scalding and fermenting the leaves, were exposed to the vapors, in which is contained the nicotina and other poisonous substances.

The slow action of the tobacco upon the operatives, according to Sig. Malier, is not less active because their symptoms are not apparent; it produces a profound change, consisting in a particular alteration of the color of the skin; it is not, he continues, a simple discoloration, or an ordinary paleness, it is a greyish aspect, with something of a heavy, tarnished look, a mixed gradation of color between that in chlorosis and in certain cachexies.\*

And if we admit that perhaps the ancients sometimes painted in too black colors the effects of tobacco upon the manipulators of it, some modern writers err just as far from the truth in undertaking absolutely to deny them, without considering that the observed lesser injury caused by the leaves of the tobacco is due, not to the innocuousness of the powder, or of the vapour, but to the material change in the method of handling it; in reducing it in a more simple way, and thus improving the hygienic condition of the operatives.† But tell me, in courtesy, if many of the recorded effects of injury which occur in the workshops are not due also to the smoking it so many hours of the day? Did I not, a little while since, call your attention to the fact that it is by means of the combustion of tobacco that the acrid and poisonous principles are evolved, particularly the nicotina, which, according to the calculations of certain chemists, includes from four to twelve parts in a thousand by weight. The mouth of the smoker, exposed as it is to the continued action of that which in itself contains substances eminently stimulating, must of necessity have its mucous surface which invests it irritated, which, with all the peculiarities which belongs to it, extends itself along the schneiderian membrane, even to the conjunctivæ of the eyes; from thence the easy separation, according to Laycock, of the epithelium with which the membranes are clothed, the swelling of the gums, the black coloring of the teeth, the production of aphthous eruptions, the excoriation of the lips, the inconvenient itching of the nose, the abundant secretion of tears, the over-sensibility to light, especially during the morning, and certain peculiar spasms of the orbicular muscles of the lids, accompanied by heavy pains in the region of the frontal sinus.‡

Besides the necessary effect upon the head, of the marked irritating action, is the superabundant secretion of saliva, and of the humours salutary in their nature, destined, when in due proportion, to maintain the first acts in the digestive process. And these abundant secretions not unusually at the cessation of the stimulus becomes altered, with remarkable dryness of the fauces, of the tongue, and of the œsophagus, which obliges the smoker to seek new means of stimulus, in alcoholic drinks, which increases the primitively injuri-

\* Annal d'Hyg. tom. xxxiv. p. 241.

† Tardieu Dictionaire d'Hygiene publique. Tome iii. Art. Tobac. Paris. 1854.

‡ Annales d'Hygiene publique xxxviii., 339. Paris. 1847.

ous effects of tobacco. That ptyalism continued for a long time should be an efficient cause of injury to the animal organism, no one will deny, when they reflect that by this means are abstracted from the blood those principles which in normal quantity are necessary to the integrity of organs and functions, and that if the ordinary secretion of any gland is continually increased, the humour secreted will be altered in its elemental constituents, and consequently become less adapted to those offices naturally reserved to them. Every time, said Boerhaave, speaking of saliva, any one makes a useless waste of this secretion, he is deprived of a great inciter of the appetite and a great aid to digestion. The chyle, to the preparation of which this fluid does not concur, is of bad quality, and the blood remains more or less altered. To this authority many others can be added, but let that of Cullen, Tissot and Bernard suffice, who, always availing themselves of the advances made in science in different epochs, confirm the ideas of the illustrious professor of the University of Leyden. In the stomach, besides, of smokers, during the deglutition of the alimentary mass, or of the drinks, as well as at other moments, the saliva descends altered in quality, or containing those noxious principles so often mentioned by us: these are those which by their nature better arrests the fermentative process, thus, according to the opinion of modern chemists and physiologists, should by analogy remain available to arrest or weaken the action of the digestive function.

And this weakening of chymification, will it not exercise a morbid influence, even upon that fluid to which in great measure organic reparation is due?—we mean upon the chyle. In accomplishing what of necessity the different acts of the digestive process do badly, the forces of the stomach and of the intestines become slowly destroyed, the appetite fails, anorexia, nausea, vomiting, heart-burn, etc., arise, all phenomena, according to the best instructed, easily observed among those smoking tobacco to excess.

These points being dwelt upon, let us next consider the injurious effects upon other parts of the economy, and particularly the apparatus of respiration. First among these is the irritating influence of the smoke upon the entire mucous membrane, which invests the respiratory surfaces from the larynx to the ultimate ramifications of the bronchial tubes. But the irritating influence should now show itself in a more violent and more injurious way, for the reason that the respiratory function is among the different ones which constitute life; that which with less impunity submits to variations from the normal standard; and consequently slight disturbances give rise to phenomena of great gravity. From thence the ready manifestation in this mucous membrane of hyperæmia, of inflammation and its attendant consequences, and finally of ulcerations; observe the fetor of the breath, the appearance of cough, accompanied or not, by different secretions: observe the great tendency to hæmoptysis, to a weakening of the pulmonary circulation; see, in fine, that



uniting of various causes to which conspire, according to recent pathologists, and especially Lebert,\* are due the development of tubercle. And what shall I say to the injury of hæmatosis, that inflicted on the blood necessarily perceived, when, instead of the contact between the long cells and atmospheric air in its primitive purity, it is in its place impregnated with nicotina, with empyreumatic oil, and with other poisonous matters? To the absorption of this, besides quite an extensive superficies of the mouth and bronchia, is offered—which two facts alone are in themselves sufficient to account for that species of dyscrasia of the blood which we have said had been noticed by Melier—that slight tolerance of blood-letting—that absence of crisis in the vital fluid which in those exposed continually to tobacco, according to the observation of Harteaux,† are found to occur. The nature of the blood being altered by reason of improper chylification, by an abnormal hæmatosis, or by the introduction into it of improper substances, the assimilative acts will be greatly disturbed; the nervous system will find itself injuriously affected by it; that natural energy will diminish which enabled it to resist certain impressions; vertigo and mental hallucinations will occur; the moral character will undergo considerable variations; tremor of the limbs will manifest itself: in one word, all of those signs which show a more or less evident narcotism, and which we deem useless to record.

If to these proofs, sustained by our opinion, we add those collected from the authority of the best writers, we find Etmullero asserting that want of appetite and weakness of the stomach are found among smokers and drinkers;‡ we find Richard Morton stating that the smoking of tobacco tends to render the lungs flaccid, and to bring on a true marasmus;§ Bonnet refers to the many great lesions found in post-mortem examinations of those who used tobacco to a very great extent;|| Tulpio saw in its use frequent cause of apoplexy; read, if you please, among the Letters of Tissot,¶ addressed to the celebrated Haller, that in which, among many other arguments, the Physician of Lausanne uses even the words of that which occupies us now,\*\* you will accept the names of those we have cited already—those of Swieten, and of Verloffio,—and conclude by saying, that the excessive smoking of tobacco injures in every instance, and each class of persons; and this truth is not weakened by the example of him who tolerates it, without finding it immediately followed by injury, for habit accustoms us to poisons the most dangerous, which do not destroy the constitution at a blow, but nevertheless do not fail in the end, to produce that result.

And even to these, if you wish to have other authorities added, we can easily refer you to the works of Ramazzini, Morgagni, Hal-

\* *Traite des Maladies scrofuleuses et tuberc.* Paris. 1849.

† Tardieu op. cit. vol. cit.

§ V. Morton, cited by Ramazzini.

¶ Tulpio. cit. by Ramazzini.

† De Togatorum valetudine tuenda, c. 4.

|| Sepulch. t. 2.

\*\* Tissot. Works of Tausanne, 1784.

ler, Borsèirî, Frank, and a thousand others. which I omit for brevity, merely contenting myself to record the opinion of Laycock. By his own observations, and that of others, he was led to affirm that inflammation and ulceration of the larynx in men who had made too great use of tobacco smoked. Leroy d'Etiolles writes, that owing to the smoking of tobacco, cancer of the lip presents itself in twenty-seven times out of a hundred cases among men, and one and a half in a hundred among women. Finally, Becquerel sustains us in signalizing, without hesitation, the use of tobacco as a custom useless and bad, and of which Hygeine ought, if possible, to seek some means to eradicate among those who contract it.

We, then, called to the exercise of an art which begun as a profession ends often as a virtue,\* should do what we can by word and act to weaken the dominion of this habit; in which, however, it does not seem to me just to find in it as a certain celebrated modern writer† wishes, a remedy against *ennui*, which he calls the disease of politeness; because if this, according to the great Romagnosi, is a cultivated and pleasing intercourse, it should not certainly give rise to one of the most painful states of the mind. And should this state unfortunately occur, youth should not seek for compensation in those habits which weaken the energy of the body, and renders still less vigorous the spirit; but they should seek for relief in the affections which purify the heart, in the hopes which comfort it, in those grave and severe studies by which the mind is elevated, and neither becomes intoxicated by prosperity, nor unduly cast down when fortune does not dispense her smiles.—[*Charleston Med. Journal and Review*.

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*The Remote Effects of Anæsthesia on the System.* By FREDERICK D. LENTE, M. D., Surgeon to the West Point Foundry, New York.

In the September number of this journal is an article on the "Permanent Effects of Anæsthetics," by Clark, of Newark, in which he mentions three cases occurring in his own practice, where he considers that the anæsthetic, without producing any untoward effects at the time of administration, sets up a train of symptoms subsequently, such as are usually denominated nervous, which were not controlled, in two instances, under the lapse of a year or more. Besides these cases, the writer mentions several others, without going into details, which have occurred in the practice of other physicians in his vicinity, in which very serious effects followed the use of anæsthetics, and were thought to have been produced by their agency, one by the late Dr. Bliss, of New York, of idiotcy and amaurosis following the use of anæsthesia during labor. Whether the unfortunate *sequelæ* of anæsthesia, in all these cases, bear the relation of *post hoc propter hoc* must be exceedingly difficult to determine,

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\* Lamartine. Raphael. Cap. 89-

† M. Levy.

even by those who watched the cases : but that this relation existed in some of them at least, is very probable by all the rules of medical evidence.

Although it has been very common, ever since the general introduction of anæsthesia into medical and surgical practice, to meet with individuals who supposed themselves suffering from the remote effects of anæsthetics, and who would assert most positively their determination never again to submit to inhalation for any purpose, we have had, as far as our information extends, no direct medical evidence bearing on the subject previous to the publication of Dr. Clark's article.

The great advantages of anæsthesia in medicine and surgery have now been established on too firm a basis to be easily shaken. For a time, like all great discoveries and inventions, it had its opponents to contend against, but they were soon borne down by the overwhelming evidence of eminent men throughout the world in its favor. Therefore, we may, at the present time, with less hesitation inquire, whether there may not be other dangers attending its use than that of immediate death, and suggest the propriety of watching patients who have been subjected to its action, for some time after, and noting any apparent ill effect. It is time that so important a subject should be investigated, and that the great experience of the profession should be known. If instances of the remote ill effects of anæsthetics occur so frequently, as we would infer from Dr. Clark's experience and that of his friends, their use certainly ought to be more circumscribed than it is. It is very probable that those who advocate the almost indiscriminate use of anæsthesia, and there are not a few in the profession who appear to do so, and who practically ignore all danger, will sneer at the record of cases tending to produce any distrust of its safety, and to restrict its application. It will be very easy for them to force the conclusion on their own mind that the alleged bad consequences were due to other agencies than anæsthesia. On the other hand, there will be some danger on the part of those who have never been strong advocates of its use, of ascribing to its influence effects which might be attributable to other causes. Still, we think it important that cases in which anæsthetics appear to have been productive of serious ill consequences should be brought to the notice of the profession, that some idea may be formed of the relative frequency of these accidents. With this view we beg to present, in connection with Dr. Clark's record, the three following cases which have occurred within the last five years in our own practice :

CASE 1.—In the summer of 1853, assisted by Dr. Leroy, formerly resident surgeon of the New York Hospital, I operated on a boy in apparent good health, eight years old, for contraction of the index and middle fingers of the right hand, the result of the cicatrization of a burn some years previously. As the case required a careful and somewhat protracted dissection of flaps into the palm of the



hand, the patient was subjected to the influence of sulphuric ether, administered by Dr. Leroy, on a sponge in the usual way. Nothing remarkable occurred either during the administration of the anæsthetic or during the operation, and but a moderate quantity of blood was lost. The patient soon recovered consciousness, but in a short time he became very feeble, and soon commenced vomiting, although no food had been allowed for seven hours previous to the operation. The pulse commenced sinking rapidly, consciousness being unimpaired. Frictions were at once resorted to, and stimulants attempted, but were immediately rejected by the stomach. The prostration soon became extreme, and dissolution appeared imminent both to Dr. Leroy and myself. Brandy was freely administered by enema, and retained, and, in the course of an hour or two reaction slowly commenced, but it was not until several hours had elapsed that it was considered safe to dress the wounds, so slowly did the patient recover from the prostration.

CASE 2.—This patient, a young man in ordinary health, not robust, æt. about 25, of nervous temperament, wished to have a large number of decayed teeth and fangs of teeth removed. At the request of the dentist, who was to operate, I administered sulphuric ether, patient sitting upright in the operating chair, a necessary position during such an operation. The patient had previously been considerably frightened both at the idea of the operation, and of the anæsthetic, although unwilling to undergo the suffering without it; he had accordingly primed himself pretty thoroughly with brandy, but was in no wise intoxicated. Nothing unusual occurred during the administration of the ether, and anæsthesia was induced without difficulty. Six stumps were rapidly and skillfully extracted, say within three minutes, perhaps within two. The patient then showed some signs of returning consciousness, and more ether was administered; anæsthesia was soon re established, and six more teeth were, with equal rapidity, extracted. The anæsthesia was very complete, but there was no unusual difficulty in recovering the patient, and he was soon able to walk home. A week or two after this, he applied to me complaining of debility, pain about the head, and dizziness, a disposition to faint and fall down, and various nervous symptoms, which, he said, had troubled him ever since the operation. He was very low spirited and fearful of some serious disease. He of course, attributed all this to the ether. I endeavored to divert his mind from this idea, and prescribed change of air and tonics. He went away, but returned within a few weeks not much better. Subsequently he improved, and after a couple of months longer was much better, though still rather nervous and desponding. He afterwards went to the city to reside, and since that time I have not seen him.

CASE 3.—W. M., a young gentleman, about 30 years old, in robust health, of temperate habits, was attacked with ulceration of the soft parts of the mouth from pressure of a crowded wisdom tooth, the pain was very severe, causing loss of rest and food. I advised the

extraction of the tooth, but the dentist to whom he applied merely cut away the overhanging edges of the ulcer; the inflammation increased and extended to such a degree as to produce almost complete closure of the jaws with inability to open them. It was absolutely necessary now that the tooth should be extracted as the only means of arresting the inflammation, and it was therefore proposed to etherize the patient in order to allow the jaws to be forced open sufficiently to admit the introduction of a forceps. Sulphuric ether was accordingly administered: the patient came rapidly under its influence, scarcely requiring an ounce and a half, though not entirely unconscious; the jaw was forced open with but little difficulty, and the tooth rapidly extracted by the dentist in attendance. The patient soon recovered, but seemed a little nervous and considerably excited, but expressed himself as entirely relieved from the severe pain he had been suffering. He was advised to go home and lie down for a few hours. He walked home, about a quarter of a mile or more, and followed my advice; but in the afternoon complained that the ether was still in his lungs, and sought to get rid of it by riding and walking. In the evening he was at the house of a friend in gay society, and seemed to enjoy himself, still however, occasionally complaining of some difficulty about his chest, when, all at once, he fell from his chair, exhibited great restlessness, tossing about of the arms and legs, with great difficulty of breathing, but no loss of consciousness, declaring all the time that he could not get his breath for the ether, and that he should die; his hands and feet were said to be cold. Before I reached him, various restoratives had been applied, and he had been almost drowned by the assiduous application of hot water. It was evident at once that it was a case of violent hysterics, unusually well marked in a male. Patient at times would laugh and joke, then express fears of impending suffocation, with jactation, declaring that as vapor of ether was heavier than air, he ought to be held up and allow it to run out of his lungs. As he was rather weighty to allow of convenient inversion, his request was not granted. Large doses of morphine were administered but had no effect; it was only after several hours that he could be quieted. The next day he was able to be up, but complained of weakness and a disposition to faint on the slightest attempt to walk, also of some difficulty of breathing. This continued for some days, but finally disappeared, and, within ten days, he was apparently in his usual condition. Patient has never previously exhibited any tendency to hysteria.—[*New York Journal of Medicine.*

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*Case of Poisoning by Stramonium.* By GEO. T. ELLIOTT, Jr., M.D.,  
Physician to the "Nursery," and to Bellevue Hospital.

At 5 P. M., October 11, I received a note from the matron, requesting me to call immediately at the Nursery, as one of the chil-

dren presented alarming symptoms, and had probably eaten some stramonium seeds.

I found Samuel Richardson, a robust little fellow, aged four years and five months, in the following condition:—Skin very red, very hot, and moist; expression of countenance wild and staring; pupil nearly fully dilated, and utterly insensible to light—a lighted candle could be so held as almost to singe the eye-lids, without inducing contraction of the iris, and without attracting the patients notice; child so wild and restless as to be controlled with difficulty, and in raging delirium, biting with fury at those who restrained him. Unable to stand, and yet plunging in a restless manner in whatsoever position he could be placed—all the movements being ill-coordinated, and resembling those of chorea. The pulse more rapid than I could count. His respiration greatly hurried, and at times gasping and choky; constantly talking, and yet unable to articulate a syllable, while from the expression of his face and movements, he seemed at times to be chasing, or fleeing from, imaginary objects.

On inquiry, I learned that his very flushed face had first attracted the matron's attention, and on noticing that there was no perspiration, she watched him; and soon found him staggering and behaving as though intoxicated, when she learned from his playmates that Sammie had been playing with the stramonium plant about an hour and a half before.

Just before I arrived he had thrown up some indigested food, and some thirty seeds, which were found to be those of stramonium. He passed water, but had had no movement of the bowels.

Ordered a tea-spoonful of mustard dissolved in water, which caused him to gasp in a somewhat alarming way, but was promptly ejected, together with more seeds. In a short time a half tea spoonful of alum dissolved in warm water was given, and after that had operated, warm water was administered. He vomited three times—a very few seeds appearing in two, and none in the third.

6 P. M. Called the matron “a nasty thing” distinctly, otherwise no change. He then slept till eight o'clock, with much jactation and restlessness, and had one large movement of the bowels unconsciously, contents not examined; when he awoke his skin was comparatively cool, and the pulse 150; pupil the same, no apparent thirst; restlessness, intolerance of control, and chorea-like movements continue.

9 P. M. Has had two more passages, one quite copious, a few seeds in the second. Head to be rubbed with iced water every few minutes.

11 P. M. Has improved. Pupil answers slightly to the candle held as before, and child conscious of its presence, and afraid of its proximity; has had two more passages with a few more seeds; can articulate pretty distinctly; can stand, and has taken three steps; chorea-like movements persistent, and patient, when not aroused, lies in a state of mild delirium; sings, talks, fancies that there are



dogs in the room, which he describes, and attempts to chase, springing suddenly to his feet, and as suddenly toppling over; sometimes talks of events of the day as though they were now taking place. Cold to the head to be discontinued.

3 A. M. Has had two passages with more seeds; passed water twice more, once very freely, thirsty. More conscious, gained in distinctness of articulation, coherence of speech, and coordination of movements, though still restless.

Oct. 12, 10 A. M. Has slept until 5 P. M., with about the same amount of jactitation, and, on awakening, had a passage containing some twenty seeds; at 8 A. M. another containing some few more, and then slept peacefully. Is now perfectly conscious; voice and articulation natural; face still markedly red; pupil somewhat dilated; pulse 120. Ordered arrow-root, hominy, or rice, with an occasional tea-spoonful of a mixture made with olive oil and thin mucilage sweetened. The pupil did not resume its natural state until the 14th, but the child is perfectly well in every respect.

The Nursery has occupied its present position for the last eighteen months, but the likelihood of such an accident was never contemplated. The writer believes that the poisoning from this source cannot but be more frequent than is generally appreciated, and for that reason has presented every symptom and incident in this case as minutely and as accurately as possible.—[*Ibid.*]

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*Ipecacuanha in Dysentery.*

It is well known that ipecacuanha was first brought into use as a remedy by the remarkable success which attended its administration in dysentery; and that, for a long while afterward, its principal use was confined to this disease, and it was considered by many to be by far the most valuable remedy known. By degrees, however, as other and important remedies were introduced, this gradually fell into comparative disuse, and now it is not uncommon to read, in our works on practice and in our medical journals, long lists of remedies for dysentery, without even any mention of this once celebrated article. Our convictions, founded on experience, not unfrequently lead us to the employment of old remedies in preference to new, and thus we have been able, in several instances, to cure this formidable disease by a substitution of the ipecac treatment for other means, under the use of which life had well-nigh been despaired of. Many years ago a young man came under our care after a long and ineffectual course of treatment for dysentery, when nearly all hope of recovery had fled and nearly every other remedy having been used, under the direction of able physicians, scarcely any resource remained but an experiment with this ancient remedy, which was made, the ipecac being given in very large quantities for several successive days, exclusive of all other medicine, when the disease subsided and the patient was cured. We have used it frequently since, with

excellent effect, both in substance and decoction ; but very recently a patient has recovered under this treatment, whose case is worthy of notice, as showing what large quantities of powdered ipecac the stomach will bear in a confirmed and obstinate case of this disease.

This was a case of several days' continuance, resisting the remedial power of various appliances in common use in this disease. The continuance of the same plan of treatment, or any part of it, seemed to promise little benefit after the experiments already made, and we, therefore, determined to make a fair trial of the ipecac. We began by administering one drachm of powdered ipecac, which producing no nausea, or other perceptible effect, was followed by another drachm in half an hour. Two other one-drachm doses were given at intervals of one hour, before vomiting was produced, and then only to a slight extent. Soon afterward a feculent stool gave the patient temporary relief from the painful tenesmus with which he was suffering. The ipecac was continued in doses of one drachm each, prolonging the intervals as the nausea and vomiting indicated, until one ounce had been given. Afterward, as the stomach had become more and more impressionable, the doses were reduced to half a drachm each, with occasional prolongation of the intervals, until a full half-ounce more was given. Then, on account of the greater susceptibility of the stomach to its influence, the doses were further reduced to fifteen grains, which now caused greater nausea than one drachm in the beginning. The dysenteric symptoms gradually subsided under this treatment, and the patient recovered. No other medicine was used until the day after the dysenteric symptoms were relieved.—[*Memphis Med. recorder.*

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*On the Treatment of Pneumonia and Pleurisy.* By Dr. NIEMEYER, Professor of Clinical Medicine in Greifswalde.

Professor Niemeyer is much opposed to the employment of general venesection in pneumonia and pleurisy, and only uses it exceptionably with a view to prevent impending suffocation, and to facilitate the reflux of the blood from the brain, but not for the purposes of arresting the inflammation. He agrees with the observation of Dieck, that the convalescence is more rapid in those cases that have been treated without, than in those which have been treated with venesection ; and he explains the fact by the increase of fibrin, and diminution in the amount of red corpuscles, induced by the venesection.

The treatment adopted by Professor Niemeyer consists in the application of compresses wrung out in cold water over the affected part of the thorax, and their renewal as often as they become warm. The great relief experienced by the patient is a sufficient guarantee, that the repetition of the application will be carefully attended to. The only internal remedy employed was nitre, in

doses of two drachms in the course of twenty-four hours. Although employed at different ages, and in various forms of the disease, no metastasis or other evil consequences have ever been noticed by the author. He has seen persons attacked with very tumultuous symptoms, enabled by this treatment to return to their occupation on the seventh day after seizure. Professor Niemeyer recommends an early exhibition of steel in the convalescence from the diseases under consideration.—[*Brit. and For. Med. Chir. Rev. and Prager Vierteljahrsschrift.*

*On the Influence of Circumcision in Preventing Syphilis.*

Mr. Jonathan Hutchinson says: "The Metropolitan Free Hospital being situated in a locality in which many Jews reside, its out-patients room furnish a good field for estimating the relative prevalence of different diseases among them and others. The following statement of my past year's experience as to venereal diseases appear to have some importance, and I am induced to communicate it at the present time with especial reference to a paper which appeared in the 'Medical Times and Gazette' of November 17, from my friend Mr. Cooper Forster, recommending the more general practice of circumcision as a preventive of certain diseases of childhood. My Jew patients have, I believe, been in proportion of nearly one-third to the other. The subjoined Table shows the proportion of the two classes of venereal disease.

|              | Total of Venereal Cases. | Gonorrhœa. | Syphilis. | Proportion of Gonorrhœa to Syphilis. |
|--------------|--------------------------|------------|-----------|--------------------------------------|
| Not Jews.... | 272                      | 107        | 165       | 0·6 to 1                             |
| Jews.....    | 58                       | 47         | 1         | 3·4 to 1                             |

Thus we find that, notwithstanding a gross proportion of nearly one-third to others, the cases of syphilis presented by Jews are only as one to fifteen. That this difference is not to be accounted for, either by their superior chastity, or by their unwillingness to seek medical aid for such diseases, is conclusively proved by the fact they furnish very nearly half the cases of gonorrhœa. The circumcised Jew is, then very much less liable to contract syphilis than an uncircumcised person. This conclusion has, I believe, been long entertained by many surgeons of experience, but I am not aware that it has ever before been made the subject of demonstration. No one who is acquainted with the effects of circumcision in rendering the delicate mucous membrane of the glans hard and skin-like, will be at a loss for an explanation of the circumstance.—Taking, then, this fact as established, it suggests itself as probable that circumcision was by Divine command made obligatory upon the Jews, not solely as a religious ordinance, but also with a view to the protection of health. Among them promiscuous intercourse was certainly not regarded in the heinous light which it is under the present dispen-



sation while polygamy and concubinage were openly permitted. One is led to ask, witnessing the frightful ravages of syphilis in the present day, whether it might not be worth while for Christians also to adopt the practice. Such a proposition, if intended only to protect the sensualists from the merited consequence of loathsome vice, would, as it is to be hoped, be dismissed at once by every right thinking man. But the matter is much wider. In syphilis the innocent suffer with the guilty, and the wife and children have often to bear the penalty of the sin of the husband and father. During the period from which the statistics just adduced have been obtained, I have had under my care at the hospital a total of 252 children under the age of five years. Of these, 179 have been of Christian parentage, and 73 of Jewish. Among the former have occurred 27 cases of congenital syphilis, while among the latter there have been but three. Thus it would appear but one twenty-fourth of the surgical diseases of Jewish children acknowledged a syphilitic cause, while no less than one-sixth of those of Christians are of such origin. In this calculation I omit altogether the numerous diseases which are, in all probability, remotely dependent on syphilis, and comprise those only which present the disease in a well-marked form. The same inferences are pointed out by counting the proportion of syphilis cases in women. Of a total of 97 women who have, during the years come under treatment for one or other form of venereal disease, 92 have been Christians, and 5 Jews. Of the 91 of the former, no fewer than 61 have suffered from syphilis, and at least two-thirds of these have been married women, who, there was every reason to believe, had contracted the disease from their husbands without any fault of their own. With regard to its being the duty of the surgeon invariably to remove the prepuce of infants born with congenial phymosis, which Mr. Forster, in the paper referred to, so ably points out, I have long held a similar opinion with his own. That opinion, together with some reason for it, are recorded at page 415 of the "Medical Times and Gazette" for Oct. 23, 1852.

*Glasgow Med. Journal.*

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*Perchloride of Iron in Panniform Keratitis.* By M. FOLLIN.

M. Follin, after adverting to the obstinacy of chronic keratitis, and to the frequent inefficacy of the various means proposed for its relief, states that he has found in the employment of the powerful astringent, the perchloride of iron, a most useful application, and that he has had his views of its utility confirmed by MM. Broca and Gosselin. He does not recommend its employment in a high degree of causticity, and believes that at 30° Beaume it is best suited for this purpose. He lets fall a large drop into the eye, by means of a quill, every second or third day, the great contraction of the eyelids that ensues rendering it necessary that all should be introduced at once. It imparts a yellow color to the eye, and

gives rise to a sense of painful constriction, which lasts for about a quarter of an hour, and then gradually diminishes, a burning sensation still continuing for some hours. A slight phlegmasia is sometimes induced the next day in the eye; but however that may be, the perchloride must be abstained from, and cold and slightly astringent applications—among which, the decoction of rhatany is a good one—must alone be resorted to. The perchloride is to be used again on the second, third, or fourth day after, according to the amount of irritation remaining from the former application; and generally it is after the second or third application that decided amelioration is perceived. The perchloride has never given rise to any accidents; and when its application could not be borne, it has not aggravated the condition of the eye. Several cases are related.—[*Brit. and For. Med. Chir. Review and Archives Générales.*

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*On the Employment of Cold in Gonorrhœal Epididymitis.* By  
Professor SIGMUND.

Whatever may be the success attendant upon the treatment of gonorrhœa in recent times, the number of cases of epididymitis does not seem to be diminished. Prof. Sigmund published in 1850 an account of the advantage he had derived from treating it with cold, and all his subsequent experience has confirmed the statements he then made. Under the term he includes the inflammatory condition of the tunica vaginalis, of the epididymis itself, and of the cord, the affection of one of these parts preponderating in different cases. The form in which the tunica vaginalis becomes rapidly distended with exudation is a very painful one; that in which the inflammation of the epididymis preponderates is less so, and when there is considerable effusion into the tunica and around the epididymis, which cases are, however, rare, the suffering is excessive, and is accompanied by general disturbance. In all degrees and combinations of the affection, cold is found to be a powerful remedy, assuaging pain, preventing further effusion, and, when continuously applied, expediting absorption more than any other means. The patient lying on his back, the scrotum is supported by means of a light suspensory, or a towel placed between the thighs, and then covered with compress dipped in water. For the first three or four hours, the degree of cold should be only moderate, lowering the temperature then gradually, and in six or eight hours adding ice, if the application acquires heat rapidly. This degree of cold is continued as long as it gives the patient relief, but when it ceases to do so, and still more when it induces an uneasy sensation, the temperature must be raised from cold to merely cool, and the application allowed to remain on until it becomes warm. Finally, lukewarm applications are to be continued until all inflammatory appearances have subsided. The application must be constant, continuing it

uninterruptedly day and night, its occasional use not sufficing. There are persons who cannot bear the application of even moderate cold, and especially when made to the abdomen, without colic, diarrhoea, catarrh, rheumatism, &c., being induced; and this is especially the case with those disposed to scrofula, tuberculosis, rheumatism, or gout. It is found, however, by experience, that even very sensitive persons will bear well-wrung compresses, provided that the degree of cold be gradually and slowly increased. Conjointly with this treatment, the patient takes a saline purgative at intervals, so as to induce from two to four fluid stools, one or two such being also procured during the diminution of the inflammation. For diet, the patient is to be limited to thin, easily-digested fluid substances, tea and coffee being prohibited during the acute stage. Young plethoric persons, in whom the symptoms run high, and are attended especially with much exudation around the epididymis, may, exceptionally, first require the application of leeches to the groin. Very severe, enduring, or increasing pain may be relieved by anodynes, and when the tunica vaginalis is much distended, a puncture or subcutaneous incision may be required: but such cases are quite exceptions, the cold proving, in the great majority, the best anodyne and antiphlogistic. At most, an anodyne is required at night, in order to secure sleep. When the inflammatory symptoms have disappeared, and the epididymis will bear the moderate pressure of the hand, we must seek to obtain the absorption of the exudation; and for this purpose, Professor Sigmund prefers Frickes's treatment to any other mode of making compression.

Numerous comparative trials have convinced him that the treatment of this affection by repeated bloodletting in nowise deserves preference, the enjoyment of cold alone proving in its results far more satisfactory in the great majority of cases. When resorted to early, also, it exerts a very rapid effect in arresting the further development of the affection.—[*Wiener Wochenschrift. British and For. Med. Chir. Rev.*]

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*On the Employment of Chlorate of Potass.* By M. ISAMBERT.

In this paper, M. Isambert, after giving the history of the employment of the chlorate since its discovery by Berthollet, its disuse, and recent revival by Hunt and others, states that he has of late investigated its therapeutical action in M. Blache's wards, at the Children's hospital, and its physiological effects by experiments upon himself. Passing over these latter, we briefly present the conclusions he has arrived at in regard to its medicinal employment.

1. *Gangrene of the mouth.*—On carefully examining Mr. Hunt's observations, he considers it very doubtful whether he has always



had to do with true gangrene of the mouth, having rather confounded this affection with ulcero-membranous stomatitis, in which the effects of the chlorate are truly remarkable. In two cases of gangrene he did not find it very serviceable; and West, who carefully distinguishes between the two affections, seems to have come to the same conclusion. •

2. *Ulcero-membranous stomatitis*.—This term, adopted by Rilliet and Barthez, well explains the nature of the affection, there being in fact, both ulceration and the formation of false membrane present, the one predominating in some cases, and vice versa. It is a most obstinate affection, having no natural tendency to a cure, and being very liable to relapse. West first employed the chlorate in this affection, and his success with it has been amply confirmed by Blache, Herpin, Bergeron, and others on the continent. Eight cases which have occurred to the author speak equally favorably. Relapse may, however, occur, though far seldomer than under any other remedy; and it should, therefore, be continued for some time after the fall of the false membrane. The chlorate, too, is powerless against the alveolo-dental pyorrhœa, or ulceration of the borders of the gum, with purulent issue from the alveoli on pressure being made upon the gum. The mean duration of treatment of these eight cases was from three to five days for the production of the fall of the membrane, and five to ten for a complete cure. When the cure was longer delayed, relapse had occurred, or the alveolo-dental pyorrhœa was present.

3. *Aphtha*.—The vesiculo-ulcerative state of the buccal cavity, to which this appellation is now confined, is in general a very mild affection, and curable by simple means. Sometimes, however, numerous and confluent ulcers produce much pain, impede feeding, and are very tedious in healing, and induce constitutional disturbance. In a case of this kind the chlorate effected a rapid cure.

4. *Muguet*.—M. Legroux has tried it in several cases of epidemic muguet at the Hôtel-Dieu, but without any favorable result. During the trials it was found to pass rapidly into the milk of the nurses, and in this way it may be administered to infants.

5. *Scorbutus*.—M. Fremy has found the medicine of use in this disease; and thus we find the moderns returning by another route to one of the first affections the chlorate was recommended for, on the theory of deoxidizing the salt in the economy.

6. *Diphtheritis*.—Observations commenced by M. Blache, and continued by the author, leave no doubt as to the utility of the chlorate. In this affection there is, however, every gradation from the most simple to the most malignant form, a sign of most unfavorable augury being found in the swelling of the parotid and deep-seated cervical glands—enlargement of the submaxillary glands occurring in even the simplest forms. Of thirteen cases, the chlorate was exclusively employed in four, and the cure was

rapid, the cases being mild ones. In two, although cauterization with nitrate of silver, was employed at the beginning, the success was attributable to the chlorate. In two others, cauterization was simultaneously employed, but the cure was not more rapid than in the others. The 9th case was a very severe one following scarlatina, and the patient was cured by the chlorate and quinine, without the aid of cauterization. The four others died, but they were cases of a very grave description. The chlorate is, therefore, no heroic remedy, always curing angina maligna, nor is its action immediate; for, although it appears in the saliva a few minutes after administration, it requires at least twenty-four hours, and usually three or four days, before it can effect its purpose. It should, therefore, be commenced with early.

7. *Croup*.—The success attendant up the chlorate in diphtheritis naturally led to its employment in croup. The author relates four cases in which the chlorate seemed to have succeeded, and refers to eleven others, in which tracheotomy was resorted to also, whether because the medicine did not seem to be taking effect with sufficient speed, or that tracheotomy having been already employed, it was given as an adjuvant to prevent the reproduction and extension of the diphtheritis. Of these eleven cases, some of which were very severe, there were eight recoveries and three deaths. Between the 1st of January and end of March, 1856, tracheotomy was performed in M. Blache's wards fourteen times with nine recoveries and five deaths, all the children taking the chlorate either prior to or subsequent to the operation. If this success be not due to the occurrence of a run of lucky cases, which occasionally occurs in practice, the result is remarkable, as the proportion of recoveries after tracheotomy, at the same hospital, has averaged during the last six years but one in four to one in five. When tracheotomy has been performed, the use of the chlorate is especially indicated, when there is a tendency in the diphtheritis to extend to the bronchi, pharynx, or nasal passages. It should be combined with expectorants and considerable doses given.\*

[*Gaz. Médicale.* *Virginia Med. Jour.*

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*On Sub-Arterial Cysts of the Wrist.* By M. CHASSAIGNAC.

M. Chassaignac calls attention to a form of ganglion which, placed beneath the radial artery, unless properly understood, may give rise to very serious errors. From excess of labor, or the exertions necessary to raise heavy burthens, the small tumor may acquire considerable development. The fingers of the surgeon, when applied over the cyst, are raised by the pulsations, which are re-

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\* We publish the observations of M. Isambert, because we are disposed to think that the salts of chlorine are not regarded with sufficient favor by American physicians. The usual dose of the chlorate of potash is from ten grains to two scruples in the 24 hours, either in the form of powder or solution.—Ed.

markable for their energy and the breadth of space they extend over. This extent of pulsatile surface immediately suggests the idea of radial aneurism, and if the examination be continued with the limb remaining in its ordinary attitude, an error can scarcely be avoided. The differential diagnosis may be established by bringing the wrist into a state of forced flexion, when—whether it is that the artery is displaced, or that it ceases to be stretched over the eminence formed by the cyst—the pulsations no longer exist, and it is evident that no aneurism is present. In treating these cases, M. Chassaignac employs the iodide of potash ointment, rubbing it in every two hours during a week. On the dorsal surface we may treat ganglia with advantage by crushing them, by subcutaneous puncture, seton, or iodide injection; but in the case of these sub-articular cysts of the wrists, which are in communication with the radio-carpal articulation, these means of treatment are not applicable. The iodine frictions give rise to no accident, and seem possessed of all desirable efficacy.

On one occasion, M. Chassaignac had the opportunity of examining one of these cysts in a subject brought for dissection. The tumor resembled an almond in form and size, and occupied the space comprised between the tendons of the *supinator longus* and the *palmaris longus*, lying on the anterior portion of the *pronator quadratus*. The radial artery in its downward progress having reached the upper part of the tumor, was at first so intimately connected with its front part as to seem to form a portion of its walls. Very soon, however, it deviated obliquely on its external side, and reached the fossette called the anatomical snuff-box. With the object of ascertaining the anatomical origin of the tumor, it was dissected with the greatest care, and separated from all parts with which it had not contracted fixed adhesions. In this way it was circumscribed for four-fifths of its extent, but posteriorly and below it was firmly fixed to the bone by a kind of pedicle proceeding from the anterior part of the lower radio-cubital articulation. It was only, in fact, a diverticulum of the synovial membrane of this joint, and it had raised up the lower fibres of the *pronator quadratus*, which, forming a kind of arc, produced a sort of strangulation of the pedicle, at its upper part. The continuity of the cyst with the articulation was completely demonstrated, a probe freely passing from one to the other.—[*Moniteur des Hôpitaux*. *British and For. Med. Chir. Rev.*

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*The Treatment of Ague by Iodide of Potassium.* By E. F. SANKEY.

Ever since I have resided in this village, (now five years,) I have been dissatisfied with the usual treatment of ague by quinine, as in some cases the disease yielded to that remedy, and in others did not. But I could think of no other treatment likely to be successful, though I tried many, including arsenic, till, some three years



ago, I read in a number of the *Medico-Chirurgical Review*, (I forget which,) that the German pathologists considered that the congested spleen (ague cake) was the cause and not the effect of the disease; and I remembered that Dr Williams had written on the efficacy of bromide of potassium in such a lesion; but not having that drug in my surgery, I determined to try the iodide of potassium instead, in the next case of ague that came before me, intending, if that failed, to procure the bromide. But I am happy to say that the object of my writing is to state to my professional brethren that I have used the iodide of potassium now in considerably more than a hundred cases, and have never yet failed in curing the disease very quickly. In some cases, where the disease has been of long, standing, and the patient very much reduced, I have added a grain or two of quinine to each dose of the iodide of potassium; but my general prescription has been for an adult: R.—Potass. iodid., ʒiiss.; aquæ menth. pip., ʒxj. M. Coch. Mag., ij. 4ta quaque hora sumend. So that there could be no doubt what was the remedy that cured the disease. In proof of the value of this drug, I will only mention one case out of all that I have thus treated.

Mrs. Smith sent for me early last month, having suffered from tertian ague, off and on, since September. Not being in very good circumstances, she went to the clergyman's wife of the parish in which she resided, who very kindly gave her some quinine, telling her it was no use sending for the medical man, as he must give her the same remedy. However, not getting well, she sent for me. After hearing what I have related, and finding she had a tolerable pulse, her bowels open and motions healthy, with a clean tongue, I sent her nothing but the above mixture; and she never had a return of the ague after the second she took of it.

I shall be glad if, by inserting this letter, other medical men will try this remedy, and report to you their experience.—[*Association Medical Journal*.

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*Lupulin in Spermatorrhœa.* By Dr. PRESHECK.

Dr. Prescheck has employed lupulin for several years in a great number of cases in which spermatorrhœa seemed to depend upon no mechanical cause. At first, he used to give two grains night and morning; but finding such doses of no avail, he prescribed from ten to fifteen grains to be taken just before bedtime, prohibiting the drinking of water after it. From such doses, even continued for a long time, he has found no inconvenience to arise, while they have acted beneficially on the disease. In some cases he combined with it one or two grains of pulv. digitalis. A valuable peculiarity in the operation of lupulin, is the beneficial action it exerts upon the digestive process, which so often suffers in these cases. It is also very useful in mitigating the urethral irritation and discharges consequent on former excesses, and in many cases

more so than iron or quinine. Its especial utility in the chordee of gonorrhoea, Dr. Pescheck has had many opportunities of witnessing. It is best administered without any additions that might diminish its bitterness, as its effects are very proportionate to the intensity of this property. Old lupulin deprived of its oil and bitter taste is almost always useless.—[*Buckner's Repert. für Pharm. Brit. and For. Med. Chir. Rev.*

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*Mode of Reducing Dislocation of the Thumb.* By JOHN DOE, M.D., of Cabot, Vermont.

Having had occasion to reduce a dislocation of the thumb several times, when the first phalanx is thrown upon the dorsum of the metacarpal bone, and having never encountered any particular difficulty in effecting it, it has been a cause of surprise to me that the method I am now to describe is not more generally known. There is not an English writer on surgery, from Sir A. Cooper to Ferguson, nor an American one, so far as I know, that alludes to this method; and if we are to judge from an article by M. Demarquay, published in the *Medical News*, of May, 1852, and accredited to the *Bulletin de Thérapeutique*, it might well be presumed that the French are also innocent of practising or teaching it.

The common method of reducing this luxation is, as is well known, to flex the thumb, fasten upon it a tape with a clove hitch, and with this make extension. If this, or more violent means do not succeed, we are directed either to abandon the attempt at reduction, or what is still worse, effect it by making incision, or by amputation of the end of the metacarpal bone. Extension has sometimes been persevered in to such a degree that the soft parts have been lacerated, or the thumb actually torn off; and in Braithwaite's *Retrospect*, part xxii., M. Blandin describes a forceps well calculated to do this.

In this dislocation, the phalangeal end of the metacarpus projects into the palmar surface of the hand, forcing itself between and through the flexor muscles of the thumb, which form a loop around the head of the bone. Extension made upon the thumb makes this loop more tense; and as the metacarpal end of the first phalanx is broad and considerably flattened on its palmar aspect, it must be apparent at once that the difficulty of reduction is directly as the amount of extension. There is good reason to believe that extension would never succeed in these cases without rotation. The principal indication in treatment here, is to relax the flexors forming the loop, so that the end of the phalanx can be pushed forward into the loop, and by carrying the muscles forward with it, disengage the head of the metacarpus. This can be done in the following manner:—

Having previously warmed the hand, if cold, in warm water,

the surgeon should seat himself by the patient, facing in the same direction, and upon the same side with the injured thumb, and place the hand upon his knee. Tip back the thumb upon the dorsum of the metacarpus to more than a right angle, or so as to form a slightly acute angle with the latter bone; place both index fingers against the ball of the thumb, and the ends of both thumbs against the dorsum of the disarticulated end of the phalanx. Now by pushing forward forcibly, yet steadily against the phalangeal bone with both thumbs, reduction will generally be effected on the first trial, and almost instantly.

The writer claims not the honor of originating this method, but supposes it to be adopted by many surgeons in this country.

[*New Orleans Med. News and Hospital Gaz.*]

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## EDITORIAL AND MISCELLANEOUS.

### *Congenital Absence of the Patella.*

Dr. WM. M. GREENE, of Lexington, Ga., communicates to us the following account of a case in which the Patella was not to be found in either of the lower extremities.

"The subject is a negro boy, now about nine months of age, and well developed in every part except the legs, which flex anteriorly instead of doing so in the natural direction. The hip-joint is in the normal state, the trochanter standing out as usual. The muscles of the thigh seem to be natural, but the quadriceps femoris bifurcates just above the condyles of the os femoris, and sends the tendon on each side of the knee-joint, to be inserted upon the sides of the tubercle of the tibia, leaving between them the space usually occupied by the patella. No patella, nor vestige of it, can be found in this case in either leg, both of which present the same anomalous aspect. The tendons forming the ham-strings, the tibia, the ankles, and the foot, are all in their natural positions. The fibula appears to be too far back, and its upper end, instead of being attached as usual, is prolonged behind the joint into an olecranon-like process which terminates in the cotyloid cavity of the femur between the posterior surfaces of the condyles, and works there after the manner of the olecranon at the elbow. While the legs flex anteriorly, no posterior flexion can be executed. The child has as yet made no effort to walk, but crawls, and sits alone."

Cases of this kind are comparatively rare. We saw one somewhat similar a few years ago, the details of which were published in this Journal by Dr. H. F. Campbell, in the volume for 1851, p. 305.



*Obstetrics: the Science and Art.* By CHARLES D. MEIGS, M. D., &c., &c. 3d edition, revised, with 129 illustrations. Philadelphia: Blanchard & Lea. 1856. 8vo., pp. 755. (For sale by T. Richards & Son.)

The present edition of the very popular author's treatise has been so revised, as to include such valuable acquisitions to knowledge in this department, as may have been made since the publication of the last. The preface also announces some amendments in the style. We doubt not that this edition will be extensively patronized by the profession, as all good books by American authors should be.

*Lectures on Materia Medica and Therapeutics:* Delivered in the College of Physicians and Surgeons of the University of the State of New York. By JOHN B. BECK, M. D., &c., &c. Prepared for the press by his friend C. R. GILMAN, M. D., &c., &c. New York: Samuel S. & Wm. Wood. 1856. 8vo. pp. 560. (For sale by T. Richards & Son.)

This is the second edition of one of the best works on the subject, for the use of students. It has been carefully "brought up" by the editor. Prof. Beck was one of our most eminent and judicious teachers, and his book bears the impress of his physiological mind.

*Handbook of Inorganic Chemistry; for the use of Students.* By WILLIAM GREGORY, M. D., F. R. S. E., &c., &c. 4th Amer. from the 3d Eng. edit. To which is added, the Physics of Chemistry. By J. M. SANDERS, M. D. LL. D., &c., &c. New York: A. S. Barnes & Co. 1857. 8vo. pp. 426. (For sale by T. Richards & Son.)

This is an exceedingly valuable manual, being full of interesting matter not easily obtained elsewhere. Its division devoted to Light, contains a good account of the many and varied processes by which images are transmitted and fixed by the chemical influence of Light, from the first invention of Daguerre to the present time. It is equally complete on the subjects of Heat, Electricity, the Metalloids, and the Metals. We cheerfully commend it to the student, and others who wish to be posted up in Inorganic Chemistry.

*An Introduction to Practical Chemistry, including Analysis.* By JOHN E. BOWMAN, F. C. S., &c., &c. 2d Amer. from the 2d revised London edit. Philadelphia: Blanchard & Lea. 1856. 12mo. pp. 300. (For sale by T. Richards & Son.)

As its title indicates, this is a mere introduction to chemistry—and although a good one, it is too brief for the use of those who ought to become well acquainted with the subject. It is better adapted to students of literary institutions, than to those of medical colleges.

*The Practical Anatomist; or Student's Guide in the Dissecting Room.* By J. M. ALLEN, M. D., &c., &c. With illustrations. Philadelphia: Blanchard & Lea. 1856. 12mo. pp. 630. (For sale by T. Richards & Son.)

The author having lately held the Professorship of Anatomy in the

medical department of Pennsylvania College, has had ample opportunity to become acquainted with the real wants of students in the dissecting room, and has furnished us with a manual well calculated to meet these wants. It is gotten up in the best style of the distinguished publishers, and reflects credit upon them, as well as upon the author.

*The Transactions of the American Medical Association.* Vol. IX. Philadelphia: T. K. & F. G. Collins. 1856. 8vo. pp. 907.

We have just received this volume, and not being able at present to notice it as we would like to do, we simply append the list of its contents:

- Minutes of the Ninth Annual Meeting of the American Med. Association.
- Report of the Committee of Publication.
- Report of the Treasurer.
- Address of George B. Wood, President of the Association.
- Report on Deformities after Fractures. By Frank Hastings Hamilton.
- Report on Hydrophobia.
- Report on the Causes which Impede the Progress of American Medical Literature.
- Report of the Committee on Medical Literature.
- Report of the Committee on Plans of Organization for State and County Societies.
- Report on the Changes in the Composition and Properties of the Milk of the Human Female, produced by Menstruation and Pregnancy. By N. S. Davis, M. D., &c., Chicago, Illinois.
- Report on the Sanitary Police of Cities. By James M. Newman, M. D., Buffalo, N. Y.
- Report on Treatment of Cholera Infantum. By A. J. Fuller.
- Report on the Use and Effect of Applications of Nitrate of Silver to the Throat either in Local or General Disease. By Horace Green, M. D.
- Report on the Best Mode of Rendering the Patronage of the National Government Tributary to the Honor and Improvement of the Profession. By Joshua B. Flint, M. D.
- Report of the Committee on Education. By Wm. Henry Anderson, M. D.
- Report on the Medical Topography of the Eastern Shore of Maryland. By P. Wroth, M. D.
- History of the Epidemic of Yellow Fever in Charleston, S. C., in 1854.
- Report on the Epidemics of Louisiana, Mississippi, Arkansas, and Texas. By Erasmus D. Fenner, M. D., of New Orleans.
- Report on the Meteorology, Mortality, and Sanitary Condition of New Orleans, for the years 1854 and 1855. By E. H. Barton, A. M., M. D.
- Report on Strychnia: Its Physiological Properties, and Chemical Detection. By Lewis H. Steiner, M. D., of Baltimore, Maryland.
- Partial Report upon a Uniform System of Registration of Births, Marriages and Deaths, and the Causes of Death. By G. S. Palmer.
- Prize Essay.—On the Arterial Circulation: Its Physiology, and Chief Pathological Relations. By Henry Hartshorne, M. D., &c.
- Plan of Organization of the American Medical Association.
- Officers of the Association for 1856.
- List of Permanent Members.

*On the Removal of Tattooed Figures from the Skin.*—The Parisian grisettes, anxious to extinguish those tokens of their former love and troth, use for this purpose, as a caustic, a solution of indigo, in sulphuric acid, after the application of which, as both epidermis and chorion peel off, a very indistinct cicatrix remains. But this process, however innoxious it may seem, is according to Parent Duchatelet, not without its dangers, he having seen it terminate fatally in the case of a young girl, where a serious erysipelatous inflammation of the arm ensued. A more safe and efficacious plan has been recommended by Dr. Ambr. Tardieu. He applies for 24 hours to the tattooed surface, a cerate, saturated with concentrated acetic acid. Then he rubs the reddened part well with strong alkalic liquid several times, and washes it well afterwards with diluted muriatic acid. In this manner, a thick scab is formed, which peels off and re-appears again several times, until after about three weeks, a plain scar is left, in which not the least trace of the former marks can be recognized, especially if cinnabar, or the vegetable red or blue inks have been used as coloring matters.

The translator of this tested the above in a case where a young gentleman in his boyish days had been guilty of the foolish practice of tattooing his hands. And this abstract is given for the benefit of those who may be consulted in similar cases.—[*Nashville Jour. of Med. and Surgery.*]

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*Impacted Rectum from Cherry Stones.*—Dr. Chapin, of Winchester, Mass., states the following case in the Charleston Medical Journal.

“In July of last year a case occurred, in my practice, of *impacted rectum from cherry stones*. The man had eaten freely of cherries, and had swallowed the stones. The next day he found himself unable to evacuate his feces, and after repeated unsuccessful trials gave it up and sent for me. He appreciated correctly his case, and had taken no physic, nor resorted to any other medicinal means for relief. He reasoned sensibly, that the passage way being thus obstructed, anything which increased the pressure downwards would only distress him without removing the cause. I of course concurred fully in the views and the course taken by the patient, and without loss of time made use of a scoop, with which a large quantity of cherry stones and hardened feces were removed, which gave immediate and entire relief.”—[*Boston Med. and Surg. Jour.*]

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*Menstruation in Old Age.*—J. J. Dixon, M. D., of Ashland, Tennessee, in a letter to the editors of the Atlanta (Ga.) Medical Journal, gives the following interesting item:

“In a few lines, I wish to record a brief account of a singular case to which I was this day called. The patient was an old lady, aged 67, who is now menstruating; she is the mother of eight children; her menses ceased nineteen years ago, since which time she has enjoyed respectable health. Menstruation returned eleven months since, and has now occurred, in all, six times. She has not suffered any serious difficulty until the present period, and her symptoms now seem to be only those attendant upon painful menstruation.”—[*Ibid.*]

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*New Use of Gutta Percha.*—It has been found that by covering a part of the conductor of an ordinary electrical machine with a thin sheet of



gutta percha, the sparks that may be drawn from the part thus covered greatly exceed in length those which can be obtained from the part uncovered. It appears that this effect depends upon the obstacle which the insulating sheet offers to the dispersion of electricity, which dispersion tends to take place from the asperities of the surface of the conductor, and which discharge it in part at a distance from this same conductor, whenever it is approached with a non-insulated conductor for drawing the sparks. It is proposed, therefore, to cover the whole conductor of the machine in this way in order to protect it from the action of moist air.—[*Memphis Medical Recorder*.

*Fatal Error in a Medical Book.*—We insert the following important correction, only adding that, in our judgment, either dose named is too large for safety:—

*Strychnia.*—Dr. Fleetwood Churchill calls attention, in the English journals, to an error in his work on *Diseases of Females*, which might lead to serious consequences. He states in the work alluded to, in treating of amenorrhœa, that strychnia has been given advantageously for its cure, in the dose of from *one-tenth of a grain to a grain*, three or four times a day. The latter dose would be unquestionably a poisonous one. The dose should be from *one-sixteenth to one-twelfth of a grain*, and it would not be wise to give more.—[*American Medical Gazette*, Sept. 1856.

*New Method of Making Sulphuric Acid.*—According to Kuhlmann, when oil of turpentine is placed in contact with an aqueous solution of sulphurous acid, and exposed to the air for some days, the mixture becomes heated, and its temperature rises 90° Fahr., and even higher; the odor of sulphurous acid quickly disappears, after which, the ordinary temperature is restored. By this reaction, for which, as it appears, the influence of the sun's rays is required, sulphuric acid is formed at the cost of the oxygen of the azonized oil of turpentine. The azonized oil exhibits the same oxidizing properties towards hyposulphites, arsenious acid, etc.—[*N. Orleans Med. News and Hospital Gaz.*

*New Method of Forming Ether.*—When dry oxide of silver is treated with an equivalent quantity of iodide of ethyl, a reaction at once ensues, and there results iodide of silver and ether. This reaction is best conducted in a sealed glass globe which dips in cold water. Without this precaution the globe breaks, from the violent evolution of heat. In the cold, this double decomposition proceeds so slowly, that from one to two days is required to convert the whole of the iodide of ethyl into ether. The ether separated by distillation in a water bath should be again treated with a small quantity of oxide of silver, to remove the last trace of iodide of ethyl.

The same reaction takes place with iodide of methyl and oxide of silver.—[*Ibid.*

*A New Alloy resembling Gold.*—For some time a new alloy has been employed in Paris for various purposes, which resembles gold in the highest degree. It consists, according to an analysis made at the Royal Industrial Institution of Berlin, of 90 parts of copper and 10 parts of zinc,—[*Ibid.*

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L. D. FORD, M. D.,  
PROFESSOR OF THE INSTITUTES AND PRACTICE OF MEDICINE.

H. V. M. MILLER, M. D.,  
PROFESSOR OF PHYSIOLOGY AND PATHOLOGICAL ANATOMY.

J. A. EVE, M. D.,  
PROFESSOR OF OBSTETRICS AND DISEASES OF WOMEN AND INFANTS.

H. F. CAMPBELL, M. D.,  
PROFESSOR OF SURGICAL, COMPARATIVE & MICROSCOPIC ANATOMY.

ROBERT CAMPBELL, M. D., Demonstrator of Anatomy.

S. B. SIMMONS, M. D., Assistant Demonstrator.

JURIAH HARRISS, M. D., Prosector to the Professor of Surgery.

G. M. NEWTON, M. D., DEAN.

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Hon. WILLIAM SCHLEY, President of the Board of Trustees.

Hon. EBENEZER STARNES, Vice-President.

H. F. CAMPBELL, M. D., Secretary.

AUGUSTA, GA., July, 1856.

## Annual Announcement.

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THE TWENTY-FIFTH COURSE OF LECTURES in the MEDICAL COLLEGE OF GEORGIA (at Augusta) will commence on the first Monday in November next, with a general Introductory by Professor L. D. FORD.

It affords the Trustees great pleasure to announce to the Medical Profession, and the Public generally, that the Institution is still in a highly prosperous condition, as the number in attendance at the last session will fully testify. A *quarter of a century* has sufficed, not only for the permanent establishment of the College, and the collection (at a cost of between fifty and sixty thousand dollars) of all the appliances for a thorough Medical Education, but has secured the favor and unwavering confidence of the Profession. The Trustees appeal without hesitation to the character of their numerous graduates—*now numbering about eight hundred*—for the evidence of the thoroughness of the course of instruction.

For the purpose of furnishing an Education to those who expect to practice in a Southern field, where the diseases are so strikingly modified by climate and the many other influences of locality, the Trustees feel fully warranted in saying that *public opinion* has for years past been decidedly in favor of SOUTHERN MEDICAL INSTITUTIONS. Not among the least of these influences are the peculiar phases assumed by many diseases as they occur in the *coloured portion of our population*, which must necessarily constitute an important part of the practice of every Southern Physician, and in relation to which, he can receive but little available indoctrination in the Northern Schools. This point the Trustees feel it their duty to insist upon with great emphasis, as an advantage of which no amount of sophistry can deprive their Institution and its graduates, before any thinking and judicious community; and they would appeal to the Graduates of Northern Colleges, now practicing in the South, to vouch for the correctness of the assertion, that it was only by experience and personal observation that they were enabled to remedy the deficiencies attaching to a Northern course of instruction, in relation to this class of their patients.

We are aware that whenever these claims of Southern Medical Institutions have been advanced, they have been met with the warmth of severe criticism on the part of the Northern press, charging us with mixing up unworthy sectionalism with scientific enquiry, or, at least, of pandering to popular prejudices; but feeling fully persuaded of the *justness* of these claims, we still urge and insist upon their recognition as truths, the denial of which is an insult to common sense, reason and universal observation, and which the everyday experience of Southern Practitioners will abundantly substantiate.

With an able and experienced Faculty, an extensively supplied Museum,

a large and well selected Library, and constantly increasing facilities for the study of all the various branches of Practical Medicine, the Board of Trustees feel safe in presenting their Institution as in every respect worthy the continued confidence and support of the Southern Medical Public.

The branches taught in this Institution, are :

### **ANATOMY.**

BY GEORGE M. NEWTON, M. D.

The lectures on this branch will describe minutely the various parts of the human organism—their intimate structure, and the relations to each other and to practical purposes. The entire course will be illustrated by recent dissections, anatomical preparations, models, plates, and diagrams.

### **PHYSIOLOGY AND PATHOLOGICAL ANATOMY.**

BY H. V. M. MILLER, M. D.

It is generally admitted, that the phenomena of disease cannot be interpreted with any probability of correctness, nor remedies applied with any reasonable expectation of success, without a thorough acquaintance with the normal action of the system. It will be the object, therefore, of the Professor of Physiology to bring to the notice of the class a full consideration of the elements entering into the formation of living tissues; the development, structure and action of these, in their primary forms, and the functions of the various organs of the body—keeping in view throughout the course, the practical ends of professional study, and passing lightly by the numerous speculations which crowd the pages of writers on this department. Those *facts* and objects of investigation which will be most beneficial to the practitioner will receive the fullest and most faithful attention.

As morbid action is most easily comprehended when studied in connexion with the healthy, of which it is but a perversion, the study of Pathological Anatomy not unnaturally connects itself with the Physiological course. The changes in the living organism induced by disease, will be traced to their origin in the original elements, or the primary tissues of the body; and the mode of formation, the classification, and description of morbid specimens will be as fully treated as the length of the term will permit.

Both of these branches will be illustrated by drawings, diagrams, specimens, &c., in such manner as greatly to facilitate the comprehension of the student.

### **SURGICAL, COMPARATIVE AND MICROSCOPIC ANATOMY.**

BY HENRY F. CAMPBELL, M. D.

Much of the importance of the study of Anatomy to the Medical Student consists in its application to Surgery, and Surgical operations. The practitioner who may be located in the country, deprived of the opportunity of repeating his dissections, and often called upon to operate without even the



advantage of a consultation, must deplore the want of such an accurate knowledge of Anatomy, as will give him confidence for his task, and secure, through him, safety to his patient. The Trustees, being fully impressed with its importance, and persuaded that lessons in Anatomy cannot be too much varied or too often repeated, have instituted SURGICAL ANATOMY an important branch of this chair. The course will consist of a series of descriptive Lectures and Demonstrations of the Relative Anatomy of the most important regions of the Human Body, particularizing the arteries, nerves, veins, &c., of each region, the injury of which would endanger the life of the patient or embarrass the surgeon during his operations.

The Lectures on COMPARATIVE ANATOMY, will give a general, but sufficiently complete, review of the various orders in the zoological scale, to enable the student to obtain a knowledge of the transcendental or philosophical anatomy of the various organs in the human being. In addition to the knowledge of comparative anatomy which the student will thus obtain, this branch will be found to assist him very materially in his study of human anatomy, by bringing in review before him the various organs as they occur in their simplest forms in the lower orders, till finally they have attained their greatest perfection in the more complicated structure of the human frame.

In this course, the lecturer will endeavor to make his teachings as much as possible subservient to the simplifying of the study of Human Anatomy, and thus this last study, instead of being a mere labor to the memory, will become enlivened by the contemplation of beautiful correspondencies, between the organs which will universally present themselves for the contemplation of the student.

The course of MICROSCOPIC ANATOMY will be illustrated principally by large painted diagrams, and also by the blackboard; but when time will allow, opportunity will be afforded the Class of seeing the objects treated of through the Microscope. This opportunity will be frequent even to every member of a large class, as our Institution is well supplied with fine Instruments—there being six in the College, some, the work of the very best makers in the world.

### SURGERY.

BY L. A. DUGAS, M. D.

The Professor of Surgery arranges the studies of his Department under five distinct heads or classes, of which the following is a very brief epitome:

The 1st class comprehends the *Diseases which occur spontaneously*, or such as are induced by causes more or less unknown. This class is subdivided into five orders, thus:—

Order 1. *Inflammatory affections*—to wit: Inflammation, its phenomena and terminations in resolution, adhesion, effusion, suppuration, ulceration and mortification; furuncles; whitlows; abscesses, both acute and chronic, of various parts of the body; ulcers of all kinds; gangrene; carbuncle;

erysipelas; scrofula; diseases of the bones and joints, &c., &c. Oorder 2. *Morbid Productions*.—Tumors of all kinds: ganglions, glandular enlargements, bronchocele, lipoma, polypi; fibrous, nervous, encysted, and malignant tumors. Order 3. *Lesions of Bloodvessels*.—Aneurism, Aneurism by anastomosis, nævus, varicose veins, hemorrhoids. Order 4. *Displacements*: prolapsus ani, prolapsus uteri, hernia. Order 5. *Congenital Deformities*, such as may require surgical treatment: club-foot, contracted or webbed fingers and toes, spina bifida, imperforate anus or vagina, hare-lip, cleft palate, &c.

The 2d class includes the *Diseases induced by special irritants*, to wit: 1, by *Animal Poisons*—syphilis, gonorrhœa, glanders, malignant pustule, bite of venomous reptiles and insects, hydrophobia, dissecting wounds. 2, by *Chemical agents*. 3, by *Caloric*. 4, by *Cold*.

The 3d class contains the *Diseases induced by external violence*: as 1. Concussion; 2. Contusions; 3. Wounds—incised, punctured, lacerated, gunshot; 4. Tetanus; 5. Fractures, in general and in particular; 6. Sprains; 7. Dislocations, in general and in particular; 8. Foreign substances introduced into the eye, ear, nostrils, pharynx, esophagus, larynx, trachea, urethra, vagina, rectum, &c.

The 4th class comprehends the *Diseases of special apparatuses*—as Diseases of the Eye and its appendages; Diseases of the Ear; Diseases of the Genito-urinary apparatus.

Finally, the 5th class refers to *Operative Surgery*—in the study of which no pains are spared to demonstrate and make familiar to the student all the details of minor surgery as well as all the operations that may be performed upon the dead subject. The Professor will here avail himself freely of the valuable aid of Dr. J. HARRISS, Prosector.

During the session, the Class will have the opportunity of witnessing as many operations as the combined efforts of the Faculty may be able to bring before them,

## CHEMISTRY AND PHARMACY.

BY ALEXANDER MEANS, M. D.

To facilitate the acquisition of knowledge in this interesting department of a medical education, an extensive Philosophical and Chemical Apparatus is at the disposition of the Professor. Many of the most important instruments have been selected under his own eye, or prepared to order—some of them, never before constructed; and the entire collection, embracing articles of the latest patterns and finest model, manufactured by the most approved makers in Paris, Boston, New York and Philadelphia.

The laws of PNEUMATICS are illustrated extensively both in their relation to Philosophy and Chemistry, by one of Chamberlain and Ritchie's magnificent *Lever Air-pumps*, accompanied by an imposing series of appendages, all made available in simplifying the principles involved, and bringing them clearly to the apprehension of even novitiates in the science.

A beautifully finished ELECTRICAL MACHINE, mounted upon a cruciform,

rose-wood frame, 8 feet long and 4 feet high, with a French Glass plate, 32 inches in diameter, supplies an abundant current for the boldest and most brilliant experiments in the Science of Electricity.

The phenomena of ELECTRO-MAGNETISM, and MAGNETO-ELECTRICITY, now so intimately connected with the most recent researches of Matteucci, Zantedeschi, and Favio in Electro-physiology, are exhibited by many pieces of new, delicate and striking Apparatus, and the principle taught, made applicable, as far as the present advancement of science authorizes, to the laws and phenomena of organic matter.

A large GROVE'S BATTERY, consisting of from 24 to 48 pairs of zinc and platinum, furnishes to the Professor, the best arrangement for a vigorous and constant Galvanic current yet known to Chemistry.

The COURSE will consecutively embrace :

1st. The *Imponderable substances*, i.e., Light, Heat, Electricity, Galvanism, Magnetism, with their various combinations.

2d. *Inorganic Chemistry*, preceded by experimental illustrations of the laws of *Chemical Affinity and Specific Gravity*, together with an explanation of the *Chemical Nomenclature, Chemical Symbols, &c.* Its natural division being :

(1.) The *non-metallic* elements—gaseous, fluid, and solid.

(2.) The *metallic* elements.

The *simple substances* being known, next follow their *combinations*, embracing the whole range of *Salts* used in Medicine, the Arts, &c.

3d. *Organic Chemistry*, mainly with reference to the constituents of the various solids and fluids of the human body, and to the chemical changes going on under the laws of life. Under this head may be classed the Chemistry of *Animal Heat, Vital Force, Respiration*, and the *sanguiferous circulation*, all of which will command the special attention of the Lecturer. *Chemistry* with its application to the MEDICAL PROFESSION, will receive *more than the usual share of attention* by the Professor of this Department.

According to the order most approved, the PHARMACY of the course is blended with the disposition of the simple and compound bodies exhibited : the *mode of preparation*, coming in most appropriately, with these details.

## INSTITUTES AND PRACTICE OF MEDICINE.

BY L. D. FORD, M. D.

The Professor of the Institutes and Practice of Medicine, commences his course with a general survey of the human body, leading to the view of its composition of a collection of organs. These organs examined in the physical, chemical and vital habitudes of their elementary tissues, under the guidance of Analytical Anatomy, leads to a high and due estimate of this science in the study of critical pathology. The functions of life resulting only from the action of these organs, the mechanism of these *normal* vital actions is examined and analysed, so far as can be done, by physical



science—this knowledge indispensable to the understanding of the abnormal actions.

Some of the more prominent subjects of General Pathology examined—

DISEASE—Its nature, deduced by consideration of its characters, its physical and functional symptoms—the disordered state of the disordered acts forming two indispensable elements of disease.

SYMPTOMATOLOGY AND SEMEIOLOGY.—Symptoms—What they are—how they come—their use—physical and functional, their relative value—their observation—their interpretation into signs.

DIAGNOSIS. Its value—its methods, &c. *Prognosis, Nosology, Etiology, &c.*

The examination of these subjects presenting the opportunity of establishing the general principles of a sound medical philosophy, according to the organic school of medicine.

In the study of individual diseases, they are arranged in five general divisions:

I. Fevers—1. Ephemeral fever. 2. Paroxysmal, Intermittent and Remittent—with variations. 3. Yellow fever. 4. Continued fevers—*a.* Simple. *b.* Typhus and Typhoid.

II. Diseases of the Brain and Nervous System—preceded by physiological considerations.

III. Diseases of the Chest—of the Heart and Lungs, and of their appendages—preceded by the full development of the method of physical exploration, by mensuration, auscultation and percussion simple and stethoscopic.

IV. Diseases of the Abdomen.

V. Diseases of the Skin, &c.

These diseases are studied with the end of obtaining as critical a knowledge of their pathology as the present state of the science affords, as the best basis for their successful treatment: Hence advantage is taken of the Plates of the best writers on Pathological Anatomy and Special Pathology, with which the College Library is so amply furnished; as also, of those valuable, plastic, colored pathological preparations, which grace the College Museum.

## **OBSTETRICS AND DISEASES OF WOMEN AND INFANTS.**

BY JOSEPH A. EVE, M. D.

The Professor of Obstetrics and Diseases of Women and Infants divides his course of lectures into four parts:

„The first consists of the peculiar Anatomy and Physiology of the female system, except parturition, which constitutes the second part.

After a full description of the bony pelvis and foetal cranium and all the organs concerned in the process of parturition, menstruation and all its disorders are considered, in detail. The various stages of development of the gravid uterus and evolution of the embryo and foetus are illustrated by

two series of beautiful models, which are most life-like and true to nature, one of wax and the other of papier maché. The symptoms and signs of Pregnancy are carefully explained, as well as the diseases incident to that state.

In the *second part*, after treating of the process of parturition and the conduct of the accoucher, and the assistance to be rendered during labour, its mechanism in all the various presentations and positions, and all obstetric manœuvres and operations are plainly demonstrated on the manakin. All the impediments and complications that may render labour tedious, difficult or dangerous, are thoroughly considered; after which, attention is directed to the management of the puerperal state and the diseases peculiar to it.

The third division, consists of lectures on the most important affections peculiar to females—such as, the various displacements of the Uterus and the structural diseases of that organ, malignant and non-malignant, most of which are illustrated by a very valuable set of models, carefully selected by Professor DUGAS, while on his last visit to Paris, and also by elegant Plates and morbid specimens from the College museum. All the instruments required in the treatment of these maladies are exhibited to the Class and their use explained.

The last division comprises lectures on Infantile Diseases, principally those that are congenital or that occur during the first few months.

### **MATERIA MEDICA, THERAPEUTICS, AND MEDICAL JURISPRUDENCE.**

BY I. P. GARVIN, M. D.

In this Course, the general principles upon which the action and application of the various medicinal agents depend are fully examined. The botanical relations, chemical constitution, and therapeutic application of each article of the *Materia Medica* is fully explained, and specimens of each exhibited to the Class. The course on Medical Jurisprudence will present a full notice of the medico-legal questions connected with Legitimacy, Impotence, Sterility, Rape, Pregnancy, Delivery, Insanity, Wounds, and other subjects belonging to this department of knowledge.

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### **PRACTICAL ANATOMY.**

To render the Instruction in this important department of Anatomy efficient, has been the constant and combined care of the whole Faculty. Attaching great importance to Dissections, they have made the most reliable arrangements for an ample supply of material, and the best opportunities will be afforded each member of the Class, to acquire a thorough acquaintance with the Anatomy of the Human Frame in all its bearings and relations. This department is still under the care and experienced management of Dr. ROBERT CAMPBELL, assisted by Dr. S. B. SIMMONS.

### CLINICAL INSTRUCTION.

The Class have free access to the City Hospital, which is under the charge of the Faculty. Clinical Lectures are delivered in the Hospital twice a week. In addition to this, all the cases of interest, and Surgical operations, in the Jackson-street Hospital, under the charge of the Drs. CAMPBELL, and in the Infirmary of Prof. DUGAS, will be brought to the notice of the Class. Students who may desire practical instruction in Obstetrics, will find ample opportunities among our large colored population, and the Professor of Obstetrics, in every such case, will superintend, and give the pupil practical instruction.

No extra charge is made for Clinical instruction.

### COLLEGE LIBRARY.

The Library consists of over four thousand volumes of the most valuable and latest works on the various departments of medical science, besides beautiful plates, diagrams, &c., &c.

### MUSEUM.

The COLLEGE MUSEUM is one of the most extensive, interesting and valuable in the United States; and is continually receiving new contributions. In order to convey some idea of its value to the student, we will merely enumerate the following objects it contains:

A number of articulated and disarticulated skeletons; numerous preparations of the cranial and facial bones connected and disconnected.

Several complete series of disarticulated foetal bones, arranged in frames.

A number of articulated skeletons of deformed individuals.

Complete series of pelves, normal and deformed, for obstetrical study.

Large collection of diseased bones, illustrating the various affections of the osseous system.

A collection of 80 specimens, natural and artificial, illustrative of craniology.

Complete series of foetal crania.

A series of foetal skeletons exhibiting the conditions of the osseous system at twelve different periods.

A series of 12 preparations showing the process of dentition at all ages.

A series of preparations of the distinct vertebræ and of the vertebral column, showing the human and comparative anatomy, internal conformation and osteology of these bones.

Entire skeletons of the principal divisions of vertebrated animals; for the study of comparative anatomy.

The skeleton of a foetal acephalous monster.

Auzoux's Adult Clastic Anatomy, being a preparation of full adult size, made of *papier maché*, and representing a complete dissection of every portion of the body, muscles, blood-vessels, nerves, brain, and spinal marrow; thoracic, abdominal and pelvic viscera; organs of the senses, &c.; the whole so constructed that its minutest subdivisions may be taken asunder and again put together.

Auzoux's Magnified Clastic Anatomy of the Head and Neck—this preparation being made very large for purposes of demonstration.

Models exhibiting the minute distribution of the vascular and nervous systems of the head.



Model showing the minute distribution of nerves within the orbit.

Separate models of all the viscera, the eye and the ear.

A series of beautiful Wax preparations by the best French artists, exhibiting the muscular, vascular, nervous, splanchnic, and sensorial organs. Also, one of the Fœtus, in which the peculiarities of fœtal circulation are displayed.

Models of the Brain, large and small—and also of the cerebro-spinal axis.

Preparations of the lymphatico-chyliferous system.

An extensive series of preparations of the natural subjects, dry and wet, consisting of complete dissections illustrative of all the ligaments, muscles, heart, arteries and veins, brain, spinal marrow and nerves, membranes of the cranial and vertebral cavities, &c.

Carteaux splendid series of Models illustrating Surgical Anatomy.

A complete series, preserved in alcohol, shewing the development of the embryo from the earliest moment to the full period of utero-gestation, embracing at least twenty distinct periods.

Auzoux's extensive series of Ovological préparations, exhibiting the development of the embryo, its membranes, and the womb at each month of utero-gestation.

Another series, by Guy, shewing also the development as well as the relative positions of the pelvic organs and the changes of the os tincæ at all periods prior to and during parturition.

Auzoux's Clastic Anatomy of the female pelvis and pelvic organs.

Models of the male and female genito-urinary apparatus.

Obstetrical mannikins.

Specimens illustrating morbid conditions of the fœtal life.

Collection of Parasitic worms.

A beautiful series of 42 models in enamel, exhibiting the various diseases of the eye.

Numerous preparations in alcohol, illustrative of Morbid Anatomy.

A dry preparation, in which all the thoracic and abdominal viscera were found to be transposed.

Numerous specimens of human monstrosity—comprehending several acephalous monsters, two cases of duplex or Siamese monstrosities, one of Hypospadias, and a fully developed Cyclops, believed to be the most perfect specimen of the kind in any museum.

An interesting collection of monstrosities of lower animals.

Collection of preparations in Comparative Anatomy, in alcohol.

Thibert's splendid models illustrative of the diseases of the uterus, of the male genito-urinary organs, and of cutaneous eruptions and ulcerations.

A complete set of Surgical instruments and apparatus.

A complete cabinet of Materia Medica, carefully selected and put up in glass-stopped bottles by one of the best druggists of New York, specially for this College.

This museum contains also a large collection of objects, which, although not strictly appertaining to the domain of Medicine, may be deemed of general interest. Among these may be mentioned: an extensive Mineralogical and Geological Cabinet—also, of Conchology, and of Ornithology. Numerous antiquities of the Aborigines; Egyptian mummies, entire and in fragments, &c., &c.

**FEES.**

|                                         |          |
|-----------------------------------------|----------|
| For the whole Course,.....              | \$105 00 |
| Matriculation, (to be taken once,)..... | 5 00     |
| Practical Anatomy,.....                 | 10 00    |
| Diploma fee,.....                       | 30 00    |

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**REQUISITES FOR GRADUATION.**

"No Student shall be an eligible candidate for the Degree of Doctor of Medicine, until he shall have attended two full Courses of Lectures in this, or one in this, and one in some other Medical Institution, in addition to the usual private reading in Medicine, and shall have delivered to the Dean of the Faculty an original Thesis on some medical subject, one month previous to the annual Commencement. In no case shall a Student of immoral character be admitted to examination."

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The Graduates of the Medical College of Georgia are entitled to practice Medicine in this State without license from the Medical Board. Upon this question, we append the legal opinion of the late Hon. A. J. MILLER.

**(LEGAL OPINION.)**

AUGUSTA, February 15th, 1853.

I have been requested to give my opinion upon the question, whether the Graduates of the Medical College of Georgia are required to undergo an examination before and to receive license to practice from the Board of Physicians.

This inquiry, I think, is plainly and satisfactorily answered by the ninth section of the act of 1828 (Dawson's Compilation, 196) incorporating the Medical Academy (now the Medical College) of Georgia. That section declares that—

"The Graduates of the Medical Academy shall be allowed to practise Medicine and Surgery in this State, in the same manner as they would have been, had they been examined and licensed by the Board of Physicians of the State of Georgia; any law, custom or usage to the contrary notwithstanding."

Considering the act of incorporation a contract between the State and Institution, and the section in question as giving a privilege conducive to the prosperity of the latter, I do not believe it to be in the power of the Legislature, by any subsequent act, to impair any part of the franchise conferred. The Legislature has not so intended; for while, by the acts of 1829 and 1833, the name of the corporation has been twice changed, and by the last an outfit provided, the powers and privileges conferred by the original charter upon the College and its graduates have not been interfered with.

It is true, that the Act of 1825, (Cobb's New Digest, 886,) prohibiting physicians from practising without a license from the Board of Physicians, has been revived by the Acts of 1839 and 1847—yet, as the Charter of the College relieved it from the provisions of that Act, afterwards repealed, the revival of it cannot affect the exemption previously granted.

ANDREW J. MILLER,  
*Attorney at Law.*

# GRADUATES

## OF THE

# MEDICAL COLLEGE OF GEORGIA.

**To the Commencement held March, 1856.**

|                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| Adams, David       | Bentley, B. F.     | Byrd, John G.      | Crawford, J. L.    |
| Adkins Daniel F.   | Berrie, E. J.      | Calhoun, J. C.     | Creighton, A. J.   |
| Adkins, Wm. L.     | Bexley, A. R.      | Campbell, H. F.    | Crews, J. E.       |
| Agar, Charles      | Bignon, H. A.      | Campbell, Robert   | Crowder, O. W.     |
| Alexander, J. F.   | Bignon, A. F.      | Cade, G. M.        | Cullens, A. A.     |
| Alfriend, Wm. L.   | Billingslea, J. C. | Carroll, J. C.     | Culver, E. V.      |
| Alfriend, E. W.    | Bird, R. L.        | Carswell, E. R.    | Cumming, W. H.     |
| Allday, A. P.      | Black, R. C.       | Carter, J. W.      | Cummins, R. L.     |
| Allen, James P.    | Blair, C. L.       | Carter, J. A.      | Cunningham, L. S.  |
| Anderson, A. F.    | Boddie, T. A.      | Carlton, J. B.     | Cunningham, G. C.  |
| Anderson, L. G.    | Bolan, M. J.       | Camac, James       | Dannelly, F. O.    |
| Anderson, W. A. J. | Bolton, G. W.      | Carey, H. H.       | Dansby, D. McA.    |
| Andrews, T. G.     | Bond, W. P.        | Casey, H. R.       | Darden, G. W.      |
| Antony, Edw. LeR.  | Bothwell, W. C.    | Cartledge, J. J.   | Darling, T. J.     |
| Antony, Milton     | Bothwell, D. J.    | Cartledge, J. J.   | Darnall, J. M.     |
| Antony, D'Coucy    | Borders, J. M.D.   | Caver, S. R.       | Davidson, Paul     |
| Antony, S. W.      | Bowen, Isaac       | Clarke, S. B.      | Davis, W. H.       |
| Ardis, C. W.       | Bowers, J. M.      | Clark, J. W.       | Davis, T. C.       |
| Archer, R. A.      | Bowers, B. F.      | Clarke, C. E.      | Davis, L. W.       |
| Arrington, W. J.   | Bowdoin, J. W.     | Clarke, G. T.      | Davis, J. G.       |
| Attaway, A. F.     | Bowdre, T. E.      | Claybrooks, W. E.  | Davis, C. Z. W.    |
| Austin, Robert     | Bowie, W. C.       | Clardy, William    | Davis, Elias       |
| Avary, J. C.       | Boyd, Samuel       | Clardy, John       | Davenport, I. T.   |
| Bailey, D. F.      | Boyd, J. C.        | Clement, J. S.     | Day, David         |
| Bailey, B. B.      | Bozeman, R. L. G.  | Clopton, J. P.     | Deane, W. W.       |
| Bailey, W. T.      | Brantley, F. M.    | Cochran, W. L.     | Dearing, W. Edward |
| Baker, J. L.       | Brewster, B. D.    | Cochran, R. J.     | Deadwyler, M. P.   |
| Baker, P. D'L.     | Brewster, S. H.    | Cochran, J. W.     | Dent, J. M.        |
| Barber, J. W.      | Brock, Elias       | Cody, J. M.        | Dicken, B. B.      |
| Barton, J. F.      | Brooks, T. J.      | Cobb, J. C.        | Dickinson, J. F.   |
| Barton, Willoughby | Browne, Jasper     | Colley, F. S.      | Dickinson, R. A.   |
| Barton, R. T.      | Brown, Josiah      | Collier, H. G.     | Dillard, J. H.     |
| Bartow, J. T.      | Brown, E. A. D.    | Collier, W. E.     | Dill, C. B.        |
| Barry, E. J.       | Brown, A. G.       | Collins, Dennis    | Dismukes, J. T.    |
| Bass, C. H.        | Broadhurst, W. W.  | Cooke, H. R.       | Dixon, R. K.       |
| Baston,            | Brunson, S. T.     | Cook, J. E.        | Donald, Alexander  |
| Bates, James       | Brunson, S. C.     | Colquitt, J. M.    | Dorsey, T. A.      |
| Banks, A. L.       | Bryans, J. H.      | Cooper, J. D.      | Douglass, Tilman   |
| Beach, Asahel      | Buchanan, J. C.    | Cooper, V. S.      | Dougherty, W. H.   |
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